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National Institutes of Health

A History of Cancer Control in the United States 1946-1971

Book Two

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BOOK TWO

A HISTORY OF PROGRAMMATIC DEVELOPMENTS IN CANCER CONTROL

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CHAPTER 1

GENESIS OF ORGANIZED CANCER CONTROL PROGRAMS 1913-37

Organized cancer control programs in the United States began in May, 1913, with the founding of the voluntary agency, the American Society for the Control of Cancer (ASCC), whose aim was to arouse public awareness that cancer could be controlled. A second organization which would play an important role in cancer control, the American College of Surgeons, was established in the same year. Concurrently, committees of the College and the American Medical Association (AMA) prevailed upon the Ladies' Home Journal to publish an article in the May, 1913, issue by journalist Samuel Hopkins Adams entitled "What Can We Do About Cancer: The Most Vital and Insistent Question in the World." (1)

While the ASCC took up the cudgel of public education using available print media and various meeting formats, the American College of Surgeons focused on professional education, particularly for the then-reigning cancer physician: namely, the general surgeon. In 1921, the College initiated what may have been the first national tumor registry. Cases of bone sarcoma were collected as a basis for learning more about the natural history of the disease. The forerunner of the College's Commission on Cancer was established in 1922. In 1931, the College initiated surveys of cancer programs in hospitals, publishing its first list of approved institutional cancer programs in 1933.

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Meanwhile, the ASCC continued to "do its bit," constrained by limited resources and limited objectives. Although non-physicians such as Frederick Hoffman, statistician with the Prudential Life Insurance Company, were among the founders, the Society was dominated by physicians, among them some of the nation's outstanding authorities in surgery, gynecology, and pathology. In the main, ASCC leadership was aristocratic and parochial. It was directed by elite medical practitioners based in prestigious medical centers along the Eastern seaboard. The sustaining operating budget of the ASCC during the 1920s and 1930s was an annual subsidy from the Metropolitan Life Insurance Company, secured at the behest of Metropolitan's statistician, Louis Dublin. (2) Only after the Society was converted to the American Cancer Society in 1946 did greater participation in policy-making by non-physicians and active involvement of volunteers from throughout the nation become a reality.

Cancer commissions were established by a number of state medical societies in the 1920s and 1930s, focusing attention on the need for standards, professional education, and conjoint efforts to improve cancer diagnosis and treatment.

In the public sector, organized cancer control efforts began in several large states long before the federal government demonstrated initiative in the area. Beginning in 1898, New York State mounted an extensive state-supported program that encompassed laboratory services, then diagnostic and treatment facilities, free diagnostic tissue service, and eventually epidemiological research and tumor registry services. In Massachusetts, a law was passed in 1926 authorizing the State Health Department to formulate a plan for the care and treatment of persons suffering from cancer. A remarkably ambitious program was

launched, encompassing a diagnostic and treatment facility (Pondville Cancer Hospital), epidemiological research directed by Dr. Herbert Lombard, and cancer clinics, which were to be established, in the words of the Massachusetts 1926 law, "with or without the cooperation [of]... local physicians..." (3)

Other states passed laws and appropriated funds for various aspects of cancer control. New Hampshire established a State Cancer Commission on July 1, 1931, which, in turn, generated 14 subsidized diagnostic clinics; Connecticut made cancer a reportable disease and organized a Division of Cancer Research by a June 13, 1935, law. That Division, directed by Dr. Matthew Griswold, organized a statewide cancer registry, the first such continuous, population-based registry in the world. (4) Georgia authorized a Division of Cancer Control by a September, 1937, law--just one month after the National Cancer Institute Act was passed--surveying private hospital cancer clinics, subsidizing care within the clinics, and providing a free tissue diagnostic service. (5) Other states, such as Missouri, followed suit upon passage of the National Act.

Cancer control as an organized program did not take hold in the United States Public Health Service (USPHS), however, until several years after World War II. Indeed, federal activities germane to cancer control prior to that time were both few and fragmented. The first recognition that cancer might require federal concern and resources emanated in the 1920s from the pioneering work of Joseph Schereschewsky, a USPHS statistician, who expanded on Frederick Hoffman's statistical work of the previous decade. He began to analyze the distribution of cancer deaths in the nation. While better reporting and an aging population raised some doubts about his conclusion that a true increase in cancer

risk was being observed, (6) Schereschewsky nevertheless recommended major national recognition of the disease as a public health problem. (7)

It took more than a decade for the federal government to heed Schereschewsky's counsel. During the 1930s, the nation was plunged into the Great Depression. Chronic diseases*, even a disease as seemingly hopeless as cancer in the 1930s, would not generate scientific or legislative interest while people were dying of tuberculosis or other conditions associated with impoverishment.

In 1937, as the nation was beginning to see economic recovery, but had not yet committed massive national resources to a global war, cancer control assumed fresh prominence. The National Cancer Institute Act was passed on August 5, 1937. The first of what has become an arsenal of research laboratories and programs, the National Cancer Institute, was established. By the terms of the law, its broad mandate was to "conduct, assist and foster . . . studies relating to the cause, prevention, and methods of diagnosis and treatment of cancer." The nation's Public Health Service, historically renowned in identifying the etiology of communicable diseases and containing their spread, was charged with broad responsibilities to control cancer.

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*The first scholarly recognition of chronic diseases was expressed by Ernst Boas in his 1940 publication The Unseen Plague: Chronic Illness. (8) A series of policy statements and reports followed. (9,10) Interest in chronic diseases was further stimulated as indigenous cancer-oriented programs in Massachusetts and Missouri began to show merit and as technology facilitated chronic disease control. At one end of the spectrum, rehabilitation techniques were adapted by Dr. Howard Rusk from life-salvage measures in World War II; at the other end, early detection of chronic diseases was facilitated by mass screening projects in Oxford, Massachusetts, San Jose, California, and elsewhere. The importance of chronic diseases--and their control--was furthered by a growing body of epidemiological evidence, particularly concerning their etiology, for cardiovascular diseases, diabetes, cirrhosis, and lung cancer.

Reflections on the Period 1913-1937

The chief characteristics of cancer control in its germinal period, 1913-1937, were two-fold. First, the initial public recognition and mobilization for cancer control was mounted by private practice physicians and a few leaders of industry and commerce. They were professionally and socially elite, known for laudable professional performance and generous public service. Second, legislation for cancer control originated not in Congress but in several states, most notably Massachusetts and New York, where working relationships between state health agencies and organized medicine were defined and reasonably amicable.

By the mid-1930s, there was a glimmer of hope that most of the nation's communicable diseases could be controlled. The solutions were clearly public in scope and authority; the tools were at hand; moreover, because of the very nature of communicable diseases, organized medicine was willingly subservient to the public health sector in their control.

In this context of improved economic and health prospects, cancer was beginning to surface more in the consciousness of people. Nearly everyone knew a friend or relative afflicted with cancer; it touched the lives of legislators and their families. A small but growing proportion of Americans were managing to survive the disease. Surgery and radiation therapy were having a positive effect in mitigating some types of neoplasia. Medical technology appeared to have great potential.

President Franklin D. Roosevelt, himself a victim of poliomyelitis, appointed Dr. Thomas Parran as his Surgeon General in 1936. A New Dealer who advocated a strengthened federal role for health, Parran resisted the proliferation of categorical disease programs, authority, and

budget. It was time, he felt, to bring all of the nation's health resources to bear on society's health problems as a whole. State health directors generally concurred with Parran's view. They perceived the categorical approach, coupled with federal largesse and direction, as eroding traditional state and local public health responsibilities. The mission of public health was at stake. Nonetheless, the trend toward federal dominance had begun with passage of the 1936 Social Security Act. Federal funds and technical assistance were made available to the states to combat specified communicable diseases, to bolster maternal and child health services, and to develop local programs along federal guidelines.

The American Medical Association resisted passage of the National Cancer Institute Act as a threat to the role of organized medicine in diagnosing and managing a disease for which they could see no "public managerial" function. (11,12) But, in the end, the groundswell of opinion persuaded Congress that the nation was ready to mount an attack on cancer.

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(1) Adams, S.H.: What can we do about cancer: the most vital and insistent question in the medical world. Ladies' Home Jrnl., May, 1913, pp. 21-22.

(2) Interview with E. Cuyler Hammond of the American Cancer Society, by Devra Breslow of HCCP, October 18, 1976, Miami, Fla.

(3) Chap. 391, Section 2, of the 1926 Acts, Commonwealth of Massachusetts. An Act to Promote the Prevention and Cure of Cancer and the Extension of Resources for its Care and Treatment. Approved May 29, 1926.

(4) Griswold, M.H., et al, in Cancer in Connecticut. Hartford, Connecticut State Department of Health, 1955.

(5) Dunn, J.E.: A Resume of State Cancer Control Programs. Washington, D.C., National Cancer Institute, USPHS, February, 1940. (mimeo)

(6) Shimkin, M.: Neoplasia. In Bowers, J.Z. and Purcell, E.F. (eds.): Advances in American Medicine: Essays at the Bicentennial. New York, Josiah Macy, Jr. Foundation, 1976. Reprinted in UCLA Cancer Center Bulletin 3:5:9, 1976.

(7) Schereschewsky, J.W.: The Course of Cancer Mortality in the Ten Original Registration States for the 21-Year Period, 1900-1920. Washington, USPHS, Public Health Bulletin #155, 1925; Idem: The prevention and control of cancer: a plan for a nation-wide organization. Pub. Health Repts. 53:961-69, 1938.

(8) Boas, E.P.: The Unseen Plague: Chronic Illness. New York, J. J. Augustin, 1940.

(9) Joint Statement of Recommendations by the American Hospital Association, American Medical Association, American Public Health Association, and American Public Welfare Association. Planning for the chronically ill. Am. J. Pub. Health 37:125, 1947.

(10) Building America's Health. A Report to the President by the President's Commission on the Health Needs of the Nation. 5 Volumes. Washington, D.C., U.S. Govt. Printing Office, 1952.

(11) Joint Hearings on Cancer Research. 75th Congress, 1st Session, July 8, 1937, at 63-71.

(12) Editorial. J.A.M.A. 109:16, October 16, 1937.

CHAPTER 2

THE NATIONAL CANCER INSTITUTE ACT OF 1937

Legislative History of the National Cancer Institute Act

The National Cancer Institute Act of 1937 set in motion a federal commitment to cancer control. While not the first congressional attention to the issues of cancer control, it was the first successful legislative venture into the field.

On February 4, 1927, Senator Matthew Neely of West Virginia introduced a bill--the first in either house--concerning cancer. In the expectation that a little old-fashioned American initiative could overcome any obstacle, Neely's proposed statute offered "$5 million to the first person who discovered a practical and successful cure for cancer." Although the measure was not acted upon by the Senate, Neely received over 2500 letters from people, worldwide, attesting to infallible cures: the application of poultices, ingestion of arsenic, egg whites, soot from wood stoves, South African boggo and stoneflower juice. Neely soon realized that the scheme was not without folly. (1)

In 1928, after consulting with Dr. Joseph Bloodgood of Johns Hopkins University and others, he proposed S. 3554. Under its provisions, $100,000 would be given to the National Academy of Sciences (NAS), a distinguished institution dating back to the Civil War, to organize a focus for cancer research. Citing the lack of funds for cancer research

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in the United States Public Health Service, Neely recommended that the NAS and USPHS undertake the effort together. He noted that, in the same year, Congress had appropriated $5 million to investigate tuberculosis in animals, $2 million for meat inspections, and $700,000 to improve cereals. The Senate Committee on Education and Labor unanimously approved the cancer research proposal and sent it to the Senate. (2) Neely was dramatic and quite convincing on the Senate floor. "If the rapid increase in cancer...should persist in the future...the cancer curse would in a few centuries depopulate the earth....(3) Every time the clock ticks off 5 minutes and 30 seconds, somebody's father...is by the cancer curse sent to the dissolution of the grave." (4)

Neely had an ally in Senator Royal Copeland, a physician, former Dean of the New York Flower Hospital and Medical School, and former President of the New York State Board of Health, who observed that "during the last 10 or 15 years, we have been at a standstill in our progress." (5) The cancer problem was costing the nation almost $800 million per year in actual health care expenditures and loss of productivity. (6)

Neely's measure passed the Senate. But, on the same day it was heard on the Senate floor, the Senate Commerce Committee favorably reported the bill introduced by Senator Joseph Ransdell of Louisiana to "establish and operate a national institute of health, create a system of fellowships in said institute, and to authorize the government to accept donations for use in ascertaining the cause, prevention and cure of disease affecting human beings...." (7)

The Ransdell Bill reflected the position of the Public Health Service and its leader, Surgeon General Dr. Hugh S. Cumming. While

cancer research could be undertaken by the Service itself with an enriched Public Health Service budget, the Surgeon General would prefer "that any increase in funds not be limited to cancer research, but possibly used for broader, coordinated explorations of many disease problems." (8)

The preference of the Service for a non-categorical disease approach won the day. Neely's bill passed the Senate but died in subsequent House committee discussions. Neither the Neely nor Ransdell bill survived the balance of the legislative process in 1928, however. Matt Neely was defeated for re-election in November. Less than two years later, though, on May 26, 1930, the Ransdell Act was signed into law, providing $750,000 for the erection of additional buildings to house the research activity of the Public Health Service. (9)

The Wall Street collapse and the Depression put a pall on congressional cancer control efforts. Dr. Dudley Jackson, a San Antonio physician-researcher who held a National Institute of Health (NIH) grant in 1936, pressed Congress to establish a Central Government Cancer Committee, a clearinghouse for information and a dispenser of grant funds. He finally persuaded Congressman Maury Maverick (D-Texas) in 1936 to introduce a bill to establish a national cancer institute. Maverick and Jackson turned to the Public Health Service for suggestions and advice. Surgeon General Thomas Parran delayed his response until April 6, 1937, when he sent Maverick several ideas.

Unknown to Maverick, Senator Hugh Bone, a Washington Democrat, had introduced a bill of his own to establish a national cancer institute. Senate Bill 2067 was introduced on March 29 by Bone and ninety-four co-signing senators. When the wife of the one holdout senator was diag-

nosed with cancer, he became the ninety-sixth signatory. Bone enlisted freshman Washington Representative Warren Magnuson to introduce an identical bill in the House. When the Bone bill was sent to the Senate Commerce Committee, chaired by Senator Royal Copeland, Surgeon General Parran assigned a staff person to consult with Copeland on hearings and arguments favoring the bill. (10)

Public pressure mounted. Articles in Fortune, Time, and Life stimulated a wave of supportive letters to Congress. In an extraordinary move, joint Senate-House hearings were scheduled on July 8, 1937, on all of the bills relating to the establishment of a national cancer institute. Bone reminded his colleagues, on June 8, that the amount of money spent for cancer research by the USPHS and by private institutions annually was less than the cost of building a few big guns. (11) The petty jealousies of scientists, one witness claimed, were holding up cancer research. (12) The American Society for the Control of Cancer and the American College of Surgeons expressed support for the Bone bill, which rapidly was passed in lieu of Maverick's and other measures.

The American Medical Association was opposed to the bill. According to the AMA, such an institute could be a forerunner of others. The AMA Journal warned: "The danger of putting the government in a dominant position in relation to medical research is apparent." (13)

Action was swift--so swift that executive branch reports were not submitted until after the congressional hearings began. President Roosevelt's desire not to have more than $1 million authorized annually for cancer research was honored. An annual appropriation of $700,000 was finally adopted. The Public Health Service, which originally ob-

jected to a special advisory council on cancer, backed off. The National Advisory Cancer Council was approved, and was given the authority to review all research projects and to certify approval prior to their being funded by the Surgeon General. Mrs. Eleanor Roosevelt, who would become a champion of many humane causes, had already been enlisted as an active member of the Women's Field Army of the American Society for the Control of Cancer, by its Managing Director, Dr. Clarence C. Little. Except for the AMA, the major forces had compromised their differences.

The National Cancer Institute Act of 1937

On August 5, 1937, President Franklin D. Roosevelt signed Public Law 244, known as the National Cancer Institute Act.

Unlike the bulk of New Deal measures, the impact of the act would not be felt in the short term. There would be no swift relief of cancer pain and suffering simply by the collective voice of Congress or the stroke of a pen. The specific mandates of the National Cancer Institute Act attest to the state of the art in 1937 and the recognition of dire deficiencies in knowledge and skilled personnel. Further, the language was explicit in defining the scope of a multifaceted cancer control program.

> The National Cancer Institute, to be a division under the Public Health Service, was established by the provisions of S. 2067, 75th Congress (Public Law 244, approved August 5, 1937) for the purpose of conducting researches [sic], investigations, experiments and studies relating to the causes, diagnosis and treatment of cancer; assisting and fostering similar research activities by other agencies, public and private; and promoting the coordination of all such researches and activities and the useful application of their results with a view to the develop-

ment and prompt widespread use of the most effective methods of prevention, diagnosis and treatment of cancer. [emphasis added]

The same act created the National Advisory Cancer Council, six members to be appointed by the Surgeon General of the Public Health Service, "with the approval of the Secretary of the Treasury and of the Surgeon General ex-officio, who shall be the chairman of the council." The six were to be selected from leading medical or scientific authorities outstanding in the study, diagnosis or treatment of cancer in the United States. "The Council is to cooperate with the Surgeon General, Public Health Service, through the National Cancer Institute, in furthering provisions of the National Cancer Institute Act."

Section 2 of the act stipulated the charge to the Surgeon General. Four clauses, emphasized below, define the core tasks of the first federal Cancer Control Program:

- to conduct, assist and foster researches [sic]
- to promote the coordination of research by the Institute and other agencies
- to procure, use and lend radium
- to provide training and technical instruction in technical matters related to the diagnosis and treatment of cancer
- to provide fellowships in the Institute
- to secure consultation, services and advice of cancer experts abroad
- to cooperate with state health agencies in prevention, control and eradication of cancer. [emphasis added]

Notwithstanding its specificity, nowhere in the National Cancer Institute Act is the term "cancer control" used as we do today. Yet the entire act focuses on cancer control. It set forth the most apparent, urgent tools then known to achieve that control: research coordination; expert counsel; distribution of a scarce, potentially

useful treatment modality; training a corps of skilled personnel; close working relationships with a network of public health agencies presumably more readily able than the Public Health Service itself to transmit directly whatever new knowledge and techniques emerged to benefit the populace.

Notes: Chapter 2

(1) U.S. Congress, Senate. Congressional Record, 70th Congress, 1st Session, 1928, vol. 69, pt. 8:9050.

(2) See note (1).

(3) See note (1) at 9048.

(4) See note (1) at 9049.

(5) See note (1) at 9049.

(6) See note (1).

(7) See note (1) at 9051.

(8) Marshino, O.: National Cancer Institute Historical Materials 1:12-13, National Cancer Institute History Division, Bethesda, Maryland.

(9) 46 Stat. 379 (Public Law 71-251).

(10) See note (8) at 2:25-28.

(11) U.S. Congress, Senate. Congressional Record, 75th Congress, 1st Session, 1937, vol. 81:5411.

(12) See note (11) at 5412.

(13) Editorial. J.A.M.A. 109:16, October 16, 1937.

CHAPTER 3

THE FEDERAL CANCER CONTROL PROGRAM IN A TIME OF WAR, 1937-1945

National Advisory Cancer Council

The first National Advisory Cancer Council was appointed immediately after passage of the 1937 National Cancer Act. The Council met on November 27 and December 13, 1937. It was charged with the authority to review research projects for grants-in-aid either submitted to or initiated by the Council, a function which suggests that the Council could, in fact, stimulate research projects to be performed intramurally as well as extramurally. The Council's second task was to collect and disseminate widely information from studies regarding the causes, prevention, diagnosis and treatment of cancer.

Surgeon General Parran appointed an impressive group of distinguished, predominately Eastern scientists and educators to the Council. Each was recognized or would soon be recognized as a statesman of American science.

James B. Conant, PhD	President, Harvard University
Arthur H. Compton, PhD	Professor of Physics, University of Chicago
James Ewing, MD	Pathologist; Director, Memorial Hospital (New York City)

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Ludvig Hektoen, MD	Director, John McCormick Institute of Infectious Diseases (Chicago)
Clarence C. Little, ScD	Director, Roscoe B. Jackson Memorial Laboratory (Bar Harbor, Maine)
Francis Carter Wood, MD	Director, Institute of Cancer Research, Columbia University

Parran was chairman of the Council (NACC); Hektoen was its first Executive Director.

The cooperation of the American Society for the Control of Cancer (in which Dr. C. C. Little was an active force) and the American College of Surgeons was enlisted. Representatives of these organizations, heads of several American medical foundations, and medical school deans met with the NACC on December 13, 1937, to discuss how best to respond to some of the specific requirements of the act.

Pharmacologist Dr. Carl Voegtlin, previously Chief of the NIH Division of Pharmacology, was appointed the first Director of the National Cancer Institute in 1938. A number of activities quickly ensued.

Radium Loan

"...to procure, use and lend radium..."

This statutory requirement addressed the relative scarcity of radium, then regarded as the next line of therapeutic defense against cancer after surgery. Half of the first year's appropriation, $200,000, was designated by the NACC to purchase radium, nine and a half grams. (At that time, only the Roswell Park Memorial Institute in Buffalo, New York, had a supply, approximately one-half that amount.) The NCI

radium resource could be lent to those US hospitals which applied for and sought Council approval. (1)

Stimulating public health interest, in a 1939 address to the American Public Health Association, Hektoen indicated that 36 hospitals had applied for radium loans and were approved by October, 1939. (2)

> "Shipments of radium are going out as fast as the radium is tested at the Bureau of Standards...Each applicant is required to obtain the approval of his application by the state health department and the state cancer commission in states having such commissions established by law, or a statement explaining why approval is refused. This requirement is made in order to secure coordination with any cancer program carried on in the state by official agencies." (3)

Traineeships

> "...to provide training and technical instruction in technical matters related to the diagnosis and treatment of cancer..."

A major mandate of the 1937 National Cancer Institute Act was to provide training, for Congress had been persuaded that the lack of trained basic and clinical personnel was a major handicap in cancer control. Not only was the cause--or multiple causes--of cancer elusive, but the nation lacked both the personnel to unravel cancer causes and qualified clinicians to manage the increasing numbers of individuals diagnosed with cancer.

Medical traineeships were established; 27 training centers in tumor pathology, radiology and surgery were designated. By 1940, 38 physicians, at least one year beyond internship, had been appointed as trainees. (4) These physicians were expected to devote themselves to cancer work. In most cases, training of 2 to 3 years was desirable

and expected. "It is believed that the system of training in the diagnosis and treatment of cancer fostered by the Cancer Act, tends to promote the growth of facilities for instruction in clinical cancer work." (5)

Cancer Research Fellowships

"...to provide fellowships in the Institute..."

To build up a reservoir of cancer research workers, fellowships were established to attract promising young people into concentrated research training. Fellows in biochemistry, carcinogenesis, genetics, lung cancer and pathology were appointed. Between 1938-1946, 43 research fellows were "'hand-picked'...selected because of special qualifications or to fill a particular place on the Institute staff." (6) (A 1959 survey of NCI research fellows indicated that of the 43, 39 were still active in conducting or administering research programs, 17 at the NCI itself.) (7)

This activity has been sustained to this day, although administratively moved from one segment of the NCI to another several times in the past four decades.

State Relations

"...to cooperate with State health agencies in prevention, control and eradication of cancer..."

The act did not indicate how the federal program was to interact with the states. Would the federal program, with a charge more specific and comprehensive than activities then functioning in a few states, have a beneficial or detrimental effect on those pioneering state efforts?

Would the federal program preserve and strengthen voluntary and professional efforts? The act took cognizance that several states had already embarked on cancer control efforts, aided by annual state appropriations, but insisted that all state health agencies would have to become involved if new knowledge and capabilities were to be disseminated throughout the nation.

In response to a resolution passed by the Conference of State and Territorial Health Officers in April, 1938, requesting the NCI to prepare a model cancer control law for information and guidance to the states, an analysis was made of existing state cancer control legislation. A model law was drafted and submitted to the Conference one year later. (8)

A State Relations Office was established at the NCI to link cancer control in the states administratively to the Institute rather than to other elements of the Public Health Service concerned with state-federal responsibilities for communicable disease control or maternal and child health services. Mindful that state initiatives preceded federal cancer control efforts (see Book Two, Chapter 1), its first charge was to survey the extent and content of state cancer control activities and legislation. A summary of these findings was compiled and distributed to health departments and cancer commissions of state medical societies. Consultation would be provided by the Office, if requested, and, as Hektoen noted in 1939, several states had availed themselves of this service. (9) By 1940, new cancer control programs had been launched in seven states and expanded in Washington, Colorado, Georgia, Massachusetts, New York, Pennsylvania and South Carolina. On the eve of World War II, 17 states had developed tax-supported state programs; three were not administered

by state health departments; nine had specific cancer laws. (10)

Intramural Research

"...to conduct, assist and foster researches..."

While today cancer research is distinguished from cancer control, under terms of the 1937 act there was no sharp distinction. Considerable research was undertaken which would bear on the future of the federal cancer control program, especially information related to etiology and frequency of certain types of neoplasia.

Studies had already been underway under Dr. Voegtlin's direction prior to 1937. Once the NCI laboratory was built in Bethesda in 1939, intramural research began in earnest. Studies were pursued of spontaneous mammary tumors in mice, dietary influences on laboratory mice and rats, the chemistry of cell growth and cell division, the pharmacology and toxicology of selenium, and the chemotherapy of infectious diseases. In Boston, the NCI supported studies of X-ray, supersonic oscillations on tumor cells, the carcinogenic properties of 1, 2, 5, 6-dibenzanthracene which induced lung and liver tumors in mice, and the induction of skin tumors by benz(a)pyrene. (11)

To grapple with cancer surveillance, a state-by-state survey was conducted to determine the manpower available for cancer epidemiology and statistical work. It revealed 4565 "assisting collaborating epidemiologists " and 34 "collaborating epidemiologists" in state health departments. The seemingly large talent pool was predominately technicians, tumor registry workers and laboratory assistants. Epidemiological research would await the training of chronic disease epidemiologists.

Another important baseline tool was provided by the 1938 statistical studies of cancer distribution in rural and urban communities directed by USPHS's Dr. Joseph Mountin.

Education

In what may be the first definable joint venture with the American Society for the Control of Cancer (later renamed the American Cancer Society), in 1940, a public educational film, Choose to Live, was made. The pattern of an enduring relationship was set: the Institute would provide the concept, perhaps even the writers, and definitely the viewpoint; the Society, with its flexibility and familiarity with public media, would produce and disseminate the product. (12)

Council Performance

Early in its deliberations, the National Advisory Cancer Council approved the general program advanced by NCI staff. They also sanctioned projects concerned with cancer statistics, incidence and treatment, in part as a basis for directing NCI's limited extramural grant-in-aid budget. In its first year, 1937-38, the Council reviewed 102 research applications totaling $1.5 million. Nineteen were approved--for an expenditure of $159,000. (13) The largest awards were to the University of California at Berkeley toward the establishment of a cyclotron laboratory under the direction of physicist E. O. Lawrence. The potential of that laboratory to produce fundamental biochemical understanding and clinical application related to cancer was but a hint of the large-scale investment in biomedical uses of ionizing radiation that would ensue after 1945, through the Atomic Energy Commission.

Upon NACC recommendation, funds were given to the American College of Surgeons to study cancer clinics and hospitals, and more modestly, the special needs of cancer clinics. (14) This award presaged a continuous commitment of the NCI to the College, which, as a voluntary professional body, has reviewed and signified approval of qualified institutional cancer programs since 1931.

In this fashion, the federal government, in particular a research and disease control component, abdicated direct responsibility for the establishment and maintenance of minimum performance standards. It deflected this responsibility to a prominent professional body in the non-governmental, private sector. The action of a hospital or clinic to seek review, consultation and eventual approval or rejection is strictly voluntary. While, since 1938, the NCI has always maintained representation on the American College of Surgeons' Cancer Commission, as well as nourishing its budget, at no time has the Institute ever determined that this function should be subsumed by the federal government, or that regulatory action is desirable. Standard setting and enforcement have been preserved in the voluntary professional realm. The NCI is deftly removed from being both a promoter and policeman of cancer management practices.

In a major undertaking, the Council approved in principle the establishment of a cancer unit at the Marine (PHS) Hospital in Baltimore. A 100-bed unit was built in 1939. It was planned not to serve the general public but only those Public Health Service beneficiaries east of the Mississippi. The clinical, research and teaching capabilities to be developed here were projected to be accessible to about 170,000 PHS beneficiaries, mainly merchant seamen, of whom 40,000 were then

estimated to be in the higher risk cancer age groups. (15)

Journal

The Institute, in its obligation to disseminate scientific information, sponsored its own journal. The Journal of the National Cancer Institute was launched in August, 1940. In volume 1, number 1, cancer control was prominently mentioned (See Appendices)

The War's Impact

In 1940, NCI Director Voegtlin set this tone for the cancer control effort: "...While our ideas and ideals are individual, our techniques in the modern world must be social. This is the method of science, real liberalism, and genuine democracy." (16)

Voegtlin's laudable objectives were temporarily suspended as war engulfed Europe and, within 18 months, drew the United States into its clutches.

By early 1941, Europe was already at war. Cancer research and other pursuits associated with a more tranquil environment, came to a standstill throughout Europe. As the United States was drawn closer and closer into the global war, the National Cancer Institute program was destined to be harmed. By the end of 1941, 39 states had begun cancer control programs; 2000 patients were reported as treated with radium lent by the NCI; 31 diagnostic and treatment centers were supported; some public informational materials were developed; mortality and incidence studies continued. Analysis of cancer incidence studies in 10 American cities set the pattern of what has become the 10-City surveys and periodic National Cancer Surveys. (17)

The war had the effect of "diaspora," Michael Shimkin has said. (18) Approximately one-third of American physicians in active full-time practice entered the Armed Forces. Those full-time trained Institute staff not on active military duty, such as Dr. John Dunn, were deployed to defense-related tasks. (19) Dunn, for example, was the first PHS Commissioned Officer explicitly assigned by the NCI to the Harvard School of Public Health in 1940 to be trained by Dr. Herbert Lombard as a Cancer Control Officer. He mastered epidemiologic and statistical techniques and compiled a Resume of State Cancer Control Programs. (20) He began writing a doctoral dissertation on cancer control. He expected to apply this new knowledge in a state health department. With the outbreak of hostilities, Dunn was reassigned to the NIH Industrial Dermatology Division. He spent the war years treating venereal disease among American military recruits. Similar defense-related functions were assumed by many others committed to cancer control.

The budget of the National Cancer Institute continued stable, despite the war. However, many of the funds were appropriated but not actually expended.

Appropriations National Cancer Institute* (Exclusive of Subventions to States)		
6/30/38	$400,000	
6/30/39	400,000	
6/30/40	570,000	
6/30/41	570,000	
6/30/42	564,000	
6/30/43	534,870	(plus printing & travel)
6/30/44	530,000	
6/30/45	561,000	

* (21) Marshino, 1947

Throughout the war, the Institute continued the radium loan program. A re-survey of state cancer control programs was conducted in 1942-43; limited consultation was provided; 56 trainees were sustained; a study of breast cancer therapy disclosed that among certain groups of patients, more than two-thirds survived more than five years. (22)

Dr. Roscoe Spencer became NCI Director in 1943.

In 1944, with the revision of the Public Health Service Act (see Stephen Strickland, Politics, Science and Dread Disease, Chapter 2, for discussion of 1944 act), the National Cancer Institute Act was preserved and codified into that act. Four NCI Divisions were established, among them two bearing on cancer control: Biostatistics directed by Harold Dorn, and Pathology directed by Harold L. Stewart.

But, in 1944, only the radium loan and traineeship activities of the original 1937 mandate remained functional. "Because of staff limitations, extensive cancer control educational work has not been possible." (23) Only 11 research grant applications were received that year. The number of clinical trainees declined in 1945. Some educational momentum was generated by producing pamphlets which advocated prevention and knowing early signs of cancer. While $1,517,422 was appropriated for cancer control from all sources in 1945, there were few takers.* (24)

The "war on cancer," if it had been called that in 1937, had been upstaged--by a real war. Medical personnel, including a number of early recipients of NCI traineeships and fellowships, were sent to the battlefield. Supplies were scarce or rationed.

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*Inconsistencies with the table on page 524 reflect state subventions and other unspecified activities not included in the tabular data.

Recovery and Reconversion, 1945-1946

At the end of World War II, the quest to control cancer would have to be renewed. A war more brutal and socially offensive than the world had ever seen had been won by social and technological means also greater in magnitude than men had imagined possible. In that climate of collective enterprise and technological promise, surely the control of cancer would find new energy, new allies.

A number of influences converged at this time which would set the course of cancer control for the next decade. First was the recognition within the National Cancer Institute that, despite efforts to "grow" enough skilled clinical and research personnel, de novo, the reservoir created since 1937 was substantially less than needed to do the job. Further, the individuals directing various components of the Institute program--almost to a man--had been trained in public health, originally in control of communicable diseases, not in cancer and other chronic diseases. The body of knowledge for implementing chronic disease control, in fact, remained uncertain. While there were a few self-taught chronic disease program personnel in several states, the nation was nearly as bereft of able leadership in cancer control in 1946 as it had been in 1937. To complicate matters, that research which had been stimulated since passage of the National Cancer Institute Act provided no clear answers about the origins or feasible control of cancer.

Given deficits in manpower and knowledge, the search for means to prevent or detect cancer early seemed increasingly to suffer from a lack of discipline and direction. The public itself was puzzled--and anxious. A popular notion began to take hold: if we could make a bomb to wipe out civilization, we ought to find a cure for cancer.

That plea for cure--rather than priority in identifying the cause or causes of cancer--did not help the cancer control movement.

It was in this spirit that Matt Neely, now in the United States House of Representatives, took up the issue anew. He introduced one of a flurry of new bills to "mobilize the world's cancer experts...in a supreme endeavor to discover the means of curing and preventing cancer." (25)

There was perhaps less hysteria in Neely's own rhetoric this time, but public opinion was aroused. Influential individuals such as health activist Mrs. Mary Lasker had entered the scene. In the ensuing debate, Surgeon General Parran attempted to defuse the idea that if you just poured enough money onto the problem, you could solve it. Parran's efforts were made all the more difficult by witnesses such as Colonel Stafford Warren, a member of the Manhattan Project, who said, "The cancer problem is no more impossible than the atomic bomb." (26)

In the 1944 reorganization of the Public Health Service, the national goals advanced by Surgeon General Thomas Parran placed priority on a sanitary environment, an adequate hospital system, an expanded public health service, augmented research in health, medical personnel in adequate numbers, and a national medical care program. Typical of Parran's non-categorical approach, cancer was but one of the health conditions Parran wanted to attack. It would get its share of attention and of the budget. Thus, in the House Appropriations Subcommittee hearing on HR 4502, NIH Director Dr. Rolla Dyer declined to accept more than the $1.75 million previously requested for cancer control and research (27) Neely charged that when compared to congressional and public enthusiasm, "the cancer people have adopted a defeatest attitude." (28)

Parran indicted World War II as the principal inhibitor of progress. The nation needed to train more people and to continue the support of encumbered universities. Parran recommended that the authorization appropriations clearly state that the "appropriations when made be available for use until spent and ... be used for provision of the necessary physical facilities...assistance for the maintenance of patients..." (29) He defined the President's options as these: to create an independent research agency, placing it either under the direction of a single individual or perhaps a commission, or the delegation of responsibility to an existing competent governmental agency. (See Book Two, Chapter 8, concerning similar proposals in 1971.) Parran felt the first option to be unsound in principle. He recommended that the Public Health Service, which contained the National Institute of Health and the National Cancer Institute, be the nucleus agency.

In the debate, the continuing leadership of the Public Health Service was nearly obscured. Parran, sensing that special interests, especially lay persons, could sway congressional opinion, explained that NIH was restricted in opportunity only by the numbers of qualified researchers available to join in the cancer conquest. (30)

Recognizing that control of cancer funds and a recharged effort was about to slip away from the two Institutes, the Public Health Service authorized Dr. Leonard Scheele, Associate Director of the NCI, to present a somewhat different explanation. He told Congress that while the Institute probably could not use all of the proffered dollars the very next year, NIH would welcome a higher appropriations ceiling. For, as soon as

the NCI built up its capacity to use the extra money effectively, it would do so. Neely and his Senate co-sponsor, Claude Pepper, were satisfied. The new money would be provided to the Public Health Service--not to a new agency.

It was late in the congressional session. The Neely bill failed to pass the Senate by 13 votes. But the thesis of investing more funds, especially in cancer research, took hold. The National Cancer Institute, in fiscal 1947, sought and secured over $14 million, a remarkable eight-fold increase over its 1946 budget of $1.8 million. This appropriation provided the first evidence within NIH that a biomedical research boom was on the horizon.

Dr. Scheele became Surgeon General in April, 1948. Receptive to special pleaders such as Mrs. Lasker and health research activist Mrs. Florence Mahoney, he had legislation drafted to attack heart disease in much the same fashion as the National Cancer Institute Act prescribed for cancer: intramural heart disease research, grants to outside institutions, training grants in science and clinical medicine. This act, swept into law on June 16, 1948, had two other promotive features: construction grants for non-Heart Institute research facilities and inclusion of laymen on advisory councils. (31)

Reflections on Immediate Postwar Period

Awed that an atomic bomb could bring Japan to its knees, reasonable men were intrigued with the idea that in applying enough money and organization you could conquer almost any problem. If we could stop a war, we could lick cancer! And polio! And a few more social ills! In the spirit

of economic recovery, those monies not used by the National Cancer Institute during the war were released: the first substantial subvention funds dispensed to the states became available in 1946. The mechanism for the NCI Cancer Control Branch to work with the states, as the USPHS had for so many years, began to evolve.

In the voluntary sector, the American Society for the Control of Cancer was being reorganized into the American Cancer Society (See Book Two, Chapter 10.)

Organized medicine was having its own battle: national health insurance, a recurrent congressional theme since 1939, was being sought anew under the Wagner-Murray-Dingell bill. The AMA was militantly opposed. Medical care programs invading the prevailing system simply would not be tolerated. Congress backed off.

Surgeon General Parran and state health officers continued to resist the categorical approach to health care manifest in growing numbers of special interest bills. They were unsuccessful. The categorical approach--taking its cue from the Manhattan Project which created the atomic bomb--would become a trend for nearly two decades. It would become the means to spawn a growing intramural and extramural research base under federal auspices (National Institutes of Health) and would nourish a biomedical establishment which eventually eclipsed the very Public Health Service in which it was cast.

During the immediate postwar period, organized medicine beat down Congress' persistent attempts to invade its world through national health insurance. Organized public health, its constituency less cohesive or militant, found itself assuming new missions that affected but would not

directly threaten organized medicine. Given these tensions, something might be done about cancer--the first chronic disease of any dimension confronted by Public Health. One arena was comprised of those state health agencies already willing to assume some responsibility for cancer control. Another locus would be America's medical schools and teaching hospitals, depleted by the war, but ready to resume their place in the social fabric.

The reactivated Cancer Control staff took another look at the 1937 act. There was fresh money and fresh talent. And an opportunity to test their mettle. In the words of the National Cancer Institute Act, to:

> provide training...provide fellowships...procure and lend radium... cooperate with state agencies in prevention, control and eradication of cancer.

(1) Hektoen, L.: The federal cancer program. Am. J. Pub. Health 30:755-59, July, 1940, at 756.

(2) See note (1).

(3) See note (1) at 757.

(4) Voegtlin, C., Spencer, R.R.: The federal cancer control program. J. Nat. Cancer Inst. 1:1-9, 1940, at 4.

(5) See note (1) at 757.

(6) Research Fellows of the National Cancer Institute. Compiled by O. Marshino. Public Health Service Pub. #658. Washington, D.C., U.S. Govt. Printing Office, 1959, at 2.

(7) See note (6).

(8) Annual Report of the Surgeon General. Treasury Dept. Document #3104. Washington, D.C., U.S. Govt. Printing Office, 1939, at 84.

(9) See note (1) at 758.

(10) See note (4) at 5-6.

(11) See note (4) at 7.

(12) Federal Security Agency. Annual Report of the Surgeon General. Washington, D.C., U.S. Govt. Printing Office, 1940.

(13) See note (1) at 757-58.

(14) See note (1) at 758.

(15) See note (1).

(16) See note (4) at 9.

(17) Annual Reports of the U.S. Public Health Service for the Fiscal Years 1941-42, 1942-43. Washington, D.C., U.S. Govt. Printing Office. 1942-43 Report at 128, 1943.

(18) Interview with Dr. Michael Shimkin, former Chief, Field Studies, National Cancer Institute, and Professor of Community Medicine and Oncology, University of California - San Diego School of Medicine, by Larry Agran and Devra Breslow of HCCP, January 21, 1976, La Jolla, Ca.

(19) Interview with Dr. John Dunn, cancer epidemiologist, State of California Department of Health, by Devra Breslow of HCCP, April 1, 1976, Berkeley, Ca.

(20) Dunn, J.E.: A Resume of State Cancer Control Programs. Washington, D.C., National Cancer Institute, USPHS, 1940. (mimeo)

(21) Marshino, O.: Activities of the National Cancer Institute and the National Advisory Cancer Council. Med. Wom. J. 54:21-27, 1947.

(22) See note (17).

(23) Annual Report of the Surgeon General. Washington, D.C., U.S. Govt. Printing Office, 1944, at 27.

(24) Annual Report of the Surgeon General. Washington, D.C., U.S. Govt. Printing Office, 1945, at 153.

(25) U.S. Congress, House of Representatives. Hearings before Committee on Foreign Affairs. 79th Congress, 2nd Session, May 7, 8, and 18, 1946, HR4502. Washington, D.C., U.S. Govt. Printing Office, 1946.

(26) See note (25), May 7 and 8, at 112.

(27) U.S. Congress, House of Representatives. Committee on Foreign Affairs. Hearings on Labor-Federal Security Agency Appropriations. 79th Congress, 2nd Session, 1947, at 290-91.

(28) See note (27) at 291.

(29) See note (25), May 7 and 8, at 4.

(30) See note (25), May 7 and 8, at 5.

(31) Strickland, S.P.: Politics, Science and Dread Disease. Cambridge, Harvard University Press, 1972, at 52-53.

CHAPTER 4

FEDERAL CANCER CONTROL PROGRAM, 1946-57

An Overview of the Period 1946-57

In what had become the National Institutes of Health, the federal cancer control program started afresh. Those control activities mandated by the 1937 National Cancer Institute Act and reinforced by the 1944 Public Health Service Act were administratively placed in the Cancer Control Branch of the National Cancer Institute.

It was a multi-faceted, wide-ranging program. From 1946-47, the National Cancer Institute greatly enlarged its scope and budget. So, too, the federal cancer control program grew--experiencing changes in leadership, name, and function. The Cancer Control Branch established in 1947 encompassed: grants to states, administration of teaching grants and clinical traineeships, radium loans, nursing activities, environmental cancer studies, biostatistics, demonstration projects, and special cancer control project grants.

Dr. Austin V. Deibert was Chief of the Cancer Control Branch from 1947-51; his deputy, Dr. Raymond F. Kaiser, succeeded him as Chief. In 1953, the name of the branch was changed to Field Investigations & Demon-

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Principal Researcher/Writer: Devra M. Breslow

strations Branch. By 1957, when the state subventions budget of the branch was moved to the Bureau of State Services outside of the National Cancer Institute, certain core activities had expanded sufficiently to justify separate branch status: training, epidemiology, biometry. By the early 1960s, some of these activities were regrouped as Field Studies, under the direction of Dr. Michael B. Shimkin. In 1960, some of the original research-focused cancer control activities that had survived previous name changes were encompassed in the Diagnostic Research Branch, which Dr. Kaiser directed until 1962.

By 1957, cancer control resources and programs were broken into fragments throughout the National Cancer Institute and the Public Health Service. Cancer control was the victim not only of natural growth in an era of instability and dependence on technology to solve problems, but of a new management philosophy within the National Institutes of Health directed by Dr. James Shannon. (See Appendix 14.)

In 1946, NCI was still a relatively modest institution. It had identity, a core of expertise, and a broad mandate.

Like so many others brought into cancer control, Deibert came from venereal disease program management. Deibert had been director of the venereal disease control center at Hot Springs, Arkansas, prior to his NCI assignment. He and Kaiser worked as a team: Deibert was the "front man," cultivating the American Cancer Society, professional societies, and maintaining contact with the NCI "front" office. Kaiser describes Deibert as "a political type....He would go out and stir things up, really. I was the guy who had to come along and put oil on the waters and calm everybody down." (1)

Kaiser was adept initially at getting programs launched, stimulating interests in grants, and mobilizing the educational component authorized by the original National Cancer Institute Act. Both men were steeped in communicable disease control. Kaiser had rotated through a variety of Service activities before being assigned to cancer control; in late 1942, Kaiser supervised the medical and health aspects of the civilian Japanese evacuation from the entire West Coast into relocation centers. In preparation for his Cancer Control Branch assignment, Kaiser took an M.P.H. degree at the Harvard School of Public Health in 1942 and spent six months getting exposed to "the state of the art" in 1946: he visited the organized cancer control programs in New York, Massachusetts, and Connecticut, and observed clinical research pursuits at Roswell Park Memorial Institute and Sloan-Kettering. (2)

The Branch staff complement was originally quite small, working in close quarters. All were Public Health Service commissioned officers, physicians and basic scientists in their late thirties and early forties (with the exception of Wilhelm Hueper, who was at least 10 years older).

In 1947, the budget for the Cancer Control Branch was comparable to that appropriated for the NCI to conduct intramural and extramural cancer research. As congressional appropriations for biomedical research steadily increased through the next decade, the Cancer Control budget remained relatively static, increasing at a much slower pace. In 1948, the total NCI budget appropriated by Congress was $14.5 million; $6.07 million supported cancer control activities. (3) In 1956, the NCI appropriation was about $25 million, of which $7.5 million, or less than one-third, supported cancer control activities. (4) In 1957, the

NCI appropriation was nearly doubled to $48 million, but cancer control activities were maintained at less than $10 million annual support. (5)

Pursuant to its flexible mandate, the dimensions of the program for the first few years were:

- environmental cancer research
- special cancer training for professional workers
- better utilization of present knowledge
- improved cancer services and facilities
- evaluation of technical services; development of new detection and diagnostic techniques.

In a sense, there were no boundaries for the Branch, both in searching for clues as to the significance of cancer as a disease and in devising methods to combat it. The focus was toward the nation as a whole: how to beef up technical competence around the country; how to strengthen cancer control capabilities; and how to apply those few early detection means at hand. (6,7)

Kaiser wrote in 1957 that the Cancer Control Branch considered its two charges to be: "1) extending the application and utilization of current knowledge about human cancer, and 2) searching for new knowledge which might be applicable to the cancer problem in humans." (8) From 1947-52, the Branch concentrated on the application of knowledge; from 1953 forward, on the search for new knowledge, signified by the name change to Field Investigations and Demonstrations Branch. (9)

The scope and character of Branch activities, Kaiser reports, were determined by the National Cancer Institute Act, as incorporated in the Public Health Service Act of 1944, by the recommendations of the National

Advisory Cancer Council and its subcommittees, and "by the training, experience and ideas of the staff members who have utilized the team approach to the problems presented." (10)

Fulfilling the training mandate of the National Cancer Institute Act meant cultivating medical, dental, osteopathic, and public health schools. Mandatory state subvention funds implied in-house consultation services and strengthening relationships with individual state health agencies and the Association of State and Territorial Health Officers. Setting minimum standards for facilities and services implied relationships with the American College of Surgeons and related professional bodies. The Branch engaged in professional and public education--through its own resources or those of other bodies. To reach both groups, the NCI Cancer Control Branch formed a healthy partnership with the American Cancer Society primarily, and with numerous health professional bodies.

From 1947 forward, the development, evaluation, and propagation of new detection and diagnostic methods drew upon the Special Projects budget of the Branch and upon the combined imaginations of intramural and extramural forces. Here, scientists and clinicians, backed by epidemiologists and biometricians, would converge on a problem, ostensibly one having the greatest potential for doing good for masses of Americans. But here, also, optimism would be tempered by technological limitations or, as in the case of the Pap smear (see Book One, Chapter 4), professional prejudices.

Since Congress stipulated that certain portions of the total Branch budget be earmarked for training, state subventions, and intramural research, management of the Special Projects budget component became the Branch's flexible tool. (This was budgeted at about $1 million annually

until a 60 percent increase in 1956.) When Congress decided that progress in certain areas was not moving swiftly enough, it began pouring more money into these areas. "Under specific direction of Congress," NCI Director Rod Heller wrote in 1957, "still greater emphasis has been placed on these studies [evaluation of cytodiagnosis] in the last two years [1954-56]. In the increased appropriation granted the Institute for 1956-57, $1 million has been earmarked by Congress for purposes of broadening the cancer cytology services." (11)

In retrospect, the question emerges: Why was there no large-scale clinical trial of cytodiagnosis conducted? The Shelby County demonstration project, discussed in Book One, Chapter 4 and in this chapter, was not a clinical trial; nor were the findings compelling enough to motivate clinicians to incorporate cytodiagnosis into their practice. Clinical trials were first developed to evaluate the usefulness of several drugs in treating tuberculosis in the 1950s and were used to test the effectiveness of the polio vaccine in the same period. These, of course, were communicable diseases. For cervical cancer--a chronic disease--there were apparently still too few trained cytotechnicians and cytopathologists available to participate in a meaningful clinical trial in which the absolute value of the Papanicolaou smear to control cancer in its early, treatable stage, could have been assessed.

In the mid-1950s, Congress also earmarked $19 million for screening and testing chemotherapeutic agents. But, as Heller knew, mandating and earmarking by themselves would not make things happen. He wrote in 1957: "Due to the inability to expand chemotherapy and cytology studies as rapidly as funds permit, neither of these allotments will be entirely spent by the end of the year." (12) One factor was the inability to re-

cruit personnel to carry out either the intent of Congress or that of the Institute. Although the Institute grew to nearly 1000 persons in that postwar decade, fully a quarter of the persons in the Field Investigations and Demonstrations Branch--in Bethesda and field cytology demonstration projects in seven United States cities--it was still not possible to meet Congress's expectations for rapid dissemination of cytologic and chemotherapeutic benefits.

Actually, by 1957, the enormous growth in the annual appropriations to the Institute had forced physical and programmatic growth. G. Burroughs Mider, Associate Director in Charge of Research, wrote, "The staff is distributed among three buildings on the Bethesda campus. Knotty problems of communication torment all of us and tend to compartmentalize the activities. These are the consequences of bigness. They are not insurmountable problems, and decentralization of responsibility with commensurate authority, accomplished a year ago [1956], has been a big step in the right direction." (13)

Fundamental Research Expertise: Epidemiology, Biometry, and Environmental Carcinogenesis

The Epidemiology Section was established within the Cancer Control Branch in 1948. Originally, it reviewed the data of other agencies, such as registry reports from states that had developed registry systems, or hospitals having large numbers of cancer cases. Eventually, the Section launched its own research studies, in cooperation with medical centers, hospitals, and professional bodies. A special unit was created at the University of Pittsburgh to explore the epidemiology of lung cancer. The smoking habits of a cross-section of Americans were surveyed in 1950.

By 1953, prospective studies directed by Harold Dorn on the possible relationship between cigarette smoking and lung cancer in veterans were underway. (14)

Biometry took a slightly different course. First called the Statistics Section of the Cancer Control Branch in 1947, it became the separate Biometry Branch in 1951, then coalesced with the Epidemiology Section for several years. (Epidemiology was restored to the Field Investigations and Demonstrations Branch in 1956.) (15) Some of the early endeavors of the Statistics-Biometry staff were analysis of: the 10-city morbidity surveys in 1937-39 and 1947; and the statewide cancer surveys of Iowa in 1950, and Shelby County, Tennessee, in 1951-52. Field Investigation grants and technical assistance to the Connecticut State Department of Health led to compilation of the monograph, "Cancer in Connecticut, 1935-51," a compilation of "the most comprehensive data available in the U.S. on cancer survival rates." (16) By the mid-1950s, major independent research was being managed by the Biometry Branch, which would become a strong nationally respected--even internationally respected--critical mass of cancer biometricians. But by 1957, what little biometry remained in the Cancer Control Branch--now called Field Investigations and Demonstrations Branch--was limited to a consultation service which concentrated on giving technical assistance to states regarding uniform and adequate statistical (registry and surveillance) programs. The Biometry Branch itself, no longer integrally part of Cancer Control, was oriented toward clinical and laboratory research, therapeutic trial design, end-results evaluation, bioassay techniques, and demographic and experimental studies. (17)

Similarly, the Environmental Carcinogenesis program, which began in 1947 with Dr. Wilhelm Hueper and a few associates, achieved section status in 1948. From its program of cooperative studies and surveys conducted in selected industries, a "cancerigenic" laboratory was established at Georgetown University Medical School in 1949-50, where animal experiments were conducted with suspected carcinogens identified from industrial surveys. (18) Kaiser noted that "One of the major studies...has been the establishment of a medical-examination program for uranium workers of the Colorado-Utah Plateau," (19) which was begun in 1953. Three years earlier, the Cancer Control Advisory Committee had recommended to the National Advisory Cancer Council, in light of Dr. Hueper's environmental surveys, that environmental cancer laboratories be established at six American university centers for which long-term support was requested. (20) But there is no evidence that the Council approved this request or that centers other than that at nearby Georgetown were established.

In the mid-1950s, the Field Investigations and Demonstrations Branch established its own environmental cancer research laboratory at Hagerstown, Maryland (see pp. 572-573), to study environmental factors in air, water, and soil, as well as to undertake other Branch-related research.

Under Kaiser's administration, environmental aspects of the cancer problem came under systematic study only in the mid-1950s. He was interested, but not a convert to their relative importance. Dr. Hueper, whose work Kaiser perhaps did not fully fathom or appreciate (see Book One, Chapter 1), was transferred in 1956 to the Office of the Associate Director in Charge of Research, Dr. G. B. Mider. As Head of the Environ-

mental Cancer Section, Hueper maintained his own research inquiries and published prolifically. But genuine coordination of environmental and occupational cancer research efforts did not exist.

In the face of growing biomedical research emphasis and frequent reorganizations, it was not easy to preserve fundamental research within the Cancer Control Branch. But the studies listed here are typical of those undertaken by the Cancer Control Branch:

- the prevalence and occurrence of cancer in Catholic nuns (of several orders in several locations);
- the geographical incidence of cancer in upstate New York;
- analysis of environmental exposures and cancer incidence among one million members of the Railroad Retirement Board followed prospectively;
- lung cancer mortality among American Tobacco Company workers in Virginia and North Carolina (21);
- determination of cancer rates in government employees, used as a control group in evaluating data on suspected environmental carcinogens;
- evaluation of environmental and other factors in leukemia by historical review of leukemia patients in Boston;
- the relation between lung and skin cancer in masseurs and attendants in Hot Springs, Arkansas, bath houses and the radioactivity of waters and environment. (22)

Soon after Dr. Kenneth Endicott became Director of the NCI in 1960, the NCI was reorganized. The Carcinogenesis Studies, Biometry, Epidemiology, and Diagnostic Research Branches were brought together

administratively as Field Studies, under Dr. Michael Shimkin's direction.

The Cancer Control Advisory Committee

From 1948 forward, a Cancer Control Advisory Committee reviewed project grant proposals and made decisions ultimately acted upon by the National Advisory Cancer Council. The scope of the Cancer Control Advisory Committee was broad. By the early 1950s, Committee Chairman Dr. Murray Copeland recalls, the Committee was concerned with developments in chemotherapy, the investigation of cancer of the stomach in Hawaii, and all of the educational and field investigations of the Branch.

The Committee, comprised of prominent clinicians and public health administrators (See Appendix), was highly prestigious and sympathetic to cancer control. From fiscal 1948 through fiscal 1956, the Committee approved the allocation of nearly $50 million throughout the nation in state subventions, field investigations, demonstrations, and educational programs.

Branch Mission

Writing in retrospect, Dr. Kaiser stated the Cancer Control Branch mission in this way:

> "The major emphasis in cancer control is placed on programs to aid the physician, by improving professional undergraduate, graduate and postgraduate education, and by providing diagnostic and other special services to help the physician to be effective." (23)

Preoccupation with the private physician--and only secondarily with other health professionals and institutions caring for cancer patients--definitely underscored the activities which projected the NCI and the Branch to the

nation as a whole. Whether the operating arena was a medical school, a local health department, a voluntary agency, or a professional body, improving the knowledge base and cancer management potential of the American physician was the uppermost objective. Whether this was a conscious alliance with organized American medicine--or simply a reasonable assessment of what could be done first--service to the American private medical practitioner was the visible hallmark of the Branch.

Intramural research certainly provided the scientific underpinnings for some of the knowledge base transmitted to health practitioners. But a fundamental question was whether research was an appropriate responsibility of a cancer control program. Did the research responsibility, in fact, tend to undermine promotion of control techniques at hand?

Cancer Education for Health Professionals

Until 1937, there was virtually no specific cancer education for physicians and dentists. Hence, graduate medical education was an early target. The plan of action was drawn up in 1946 by six members of the National Advisory Cancer Council and 22 medical school deans. They decided to: 1) have the deans conduct a survey of cancer teaching in medical schools; 2) consider introducing integrated courses in cancer; and 3) stimulate cancer research as an aid to teaching. The Public Health Service would provide funds to improve cancer instruction; $1.5 million was appropriated by Congress expressly for grants to medical schools for this purpose. By mid-1949, 73 medical schools were participating, with awards ranging up to $25,000 per year. (24) By 1950, all American medical schools were participating. (25)

The strategy was to teach cancer horizontally, that is, by strengthening existing courses. Each school would designate a cancer coordinator, reinforced by a committee. Some "vertical" courses, concentrated oncology learning blocks, could be combined in the fourth, patient-care oriented year. Medical school coordinators were urged also to offer postgraduate training for community practitioners, to maintain follow-up statistics on observed cancer cases, and to embark on cancer research. Evaluation was expected but left up to the institution.

In a three-year evaluation of the total program, Kaiser noted that a substantial majority of 79 medical schools had instituted new "vertical" cancer courses concerned with cancer biology; 20 had established tumor clinics; 9 had established tumor registries; 27 had established cancer cytology teaching services; 22 taught how radioisotopes could be used in cancer detection; 36 had established cancer research-related activities; 51 had strengthened their basic research activities; and 31 had undertaken clinical research studies. (26) The funds were flexible. They were to be used chiefly to subsidize a cancer coordinator and materials facilitating graduate medical education. The fact that so many medical schools found ways to channel some of the funds and priority into research probably stems from the flexibility allowed in the management and expenditure of these funds. After initial success, however, questions were raised about the propriety of using these funds for other medical school needs. (27) The National Advisory Cancer Council was aware that some medical schools might not be using the annual $25,000 "education" grant as it had intended, but, in 1955, the Council recognized it was not an accrediting body and could not enforce minimum program standards on individual medical schools. Council member Dr. Edward

Chamberlain expressed it this way:

> "We adopted a policy several years ago of giving this $25,000 to each of these schools and letting them make their mistakes and learn by their mistakes, and we are... happy about the way in which they are taking cognizance of the work each is doing." (28)

The medical school cancer education program was generally accepted and successful, stimulating participation even of internists, Kaiser noted in his 1950 assessment. It pointed up the need and potential for integrating cancer teaching into the total curriculum, rather than separating it into public health, therapeutic, and research aspects. Other spin-offs included cancer clinics, cancer histopathology services, even the establishment of institutional registry systems and encouragement of student research. The program also stimulated expansion of clinical research. In Kaiser's view, it furthered postgraduate teaching and closer working relationships between medical schools and official health agencies.

In 1953, Kaiser wrote with pride that increasing numbers of American medical schools had spawned cancer committees and that some grant awards had been expended on visual aids equipment as adjuncts to clinical and didactic teaching. Some motivated students had been assigned to projects relating to home care and to local health department cancer control activities. The preponderance of cancer coordinators, he observed, were surgeons (37), followed by pathologists (24), radiologists (7), or internists (7). (29)

The last time that Kaiser took a look at the program, in 1955, he concluded, "The mere existence of a coordinator and the availability of grant funds has served as a stimulus to focus the attention of the medical school faculty on the cancer problem." (30)

Kaiser's enthusiastic appraisal was supported by substantial evidence: Eighty-two American medical schools were participating in the program, 42 for the seventh consecutive year. While there had been some turnover in coordinators, 53 had served consistently. At this point, 52 American medical schools had added one or more new cancer-focused courses and 22 had extended the teaching of cytology. Kaiser concluded that the program had enabled institutions to secure and retain qualified teachers. (31)

Perhaps of greater importance to Kaiser personally, the program provided funds to establish cytology and isotope laboratories, focusing attention on cancer, (32) and also making inroads against the resistance of some private pathologists to accepting cytology as a useful means of early cancer detection.

On the early strength of the graduate medical teaching program, a comparable program was established for America's 43 dental schools. Following a meeting between the NCI Cancer Control Branch and the American Dental Association's Council on Dental Education in 1947, the program was launched a year later. In 1955, as compared with virtually no cancer education in the prewar period, Kaiser reported that 17 schools had participated steadily since its inception. Cancer coordinators, in the main, were oral pathologists. (33)

In 1951, the medical school cancer education program was extended to schools of osteopathy. In addition, five American nursing schools, widely distributed geographically, had received $10,000 each for five years, from 1952 forward, to determine the most practical methods of producing future graduates with a better understanding of cancer. The goal, of course, then as today, was to integrate cancer education into the traditional curriculum. (34)

The Clinical Traineeship Program, mandated by the National Cancer Institute Act, was managed initially by the Branch. Unlike the medical education program, it had flourished steadily since 1938, although it was sharply reduced in wartime. Kaiser's 1954 survey, covering the period 1938-53, produced some interesting observations. The NCI had supported during those 15 years 451 clinical trainees: of the 237 (53 percent) who responded to the mail questionnaire, 59 had completed their training at Memorial Hospital in New York, 17 at the University of Minnesota, 16 at the University of Pennsylvania, 13 at Bellevue (NYC), 10 each at University of California - San Francisco, University of Michigan, and Columbia University Hospitals. The geographic spread was encouraging: by the early 1950s, centers for clinical oncology were not limited to Memorial Hospital; pockets of competence were emerging throughout the nation. (35) Promoting the notion of geographic spread, fully 70 percent had established themselves away from training centers, in what Kaiser and others expected would be a better distribution of their expertise.* (36)

Another small group of individuals was given postgraduate training of another sort. First, a half-dozen PHS commissioned officers evincing interest in cancer control were sent to the Harvard School of Public Health

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*Dr. Margaret Edwards chronicled the administrative history of all NCI training programs, including the clinical traineeships, in: Training Programs of the National Cancer Institute, Cancer Research, 35:2391-95, October, 1975. She pointed out that the clinical traineeships and cancer control officer traineeships were transferred from the FI&D Branch, NCI, to the Bureau of State Services in 1957, and by 1975 were being phased out. In 1973, new clinical research fellowships, named for then HEW Secretary Casper Weinberger, were created; they provide three years of clinical training but have a "payback" provision. The Weinberger and other fellowship programs, chiefly in research, are now administered under the National Research Act (1974, PL 93-348), for which opportunities exist in carcinogenesis, drug development, epidemiology, immunology, tumor biology, radiation, and viral oncology.

for about a year each, to acquire some of the technical know-how offered by Dr. Herbert Lombard. Several men who later distinguished themselves in cancer control--John Dunn, Raymond Kaiser, Lewis Robbins and others--underwent such tailor-made, cancer-focused educational programs.

The original 1937 National Cancer Institute Act, and subsequent implementation of the federal-to-state subvention principle, evidenced an abiding confidence in the philosophy of federalism with respect to cancer control. The Cancer Control Program embraced the traditional notion that the states could serve effectively as "laboratories of experimentation." (37) Federal-state public health relations had been the pattern established in environmental and communicable disease control, and in maternal and child health services. This pattern induced Congress in 1937 to specify that cancer control activities be conducted with state health agencies--especially since several states were already engaged in such activities. But cohesive and expanding state cancer control programs did not result. One factor may have been the lack of committed, trained personnel.

Consistent with the emphasis on state initiatives, it became paramount to train cancer control program directors for the states. Funds were offered to schools of public health as they were to medical and dental schools. Specifically, these monies were for training selected individuals in cancer control program administration; the aim was then to station the postgraduates in regional Public Health Service offices, or, better yet, in state health departments. Harvard, Yale, and the University of California at Berkeley took advantage of the opportunity. But few physicians were trained or stayed in cancer control, once placed in state health agency posts.

Dr. Edward Cohart, one such trainee, was assigned by the Public Health Service to the Massachusetts Public Health Department after his Harvard training. When he later migrated to Yale, his interest expanded to all chronic diseases. Dr. Harold Graning, with comparable training, returned to PHS headquarters in Washington and pursued a career in health services administration. The man being groomed for the California State Department of Public Health became a practicing dermatologist instead.

The impact of this program didn't please Kaiser. "I would say that we didn't come close to accomplishing anything, not because of the procedures of training, but because the environment didn't seem to be right for state health activities, for state health departments, to get intensely involved....Somehow or other, it never caught fire." (38)

With the approval of the Cancer Control Committee and the National Advisory Cancer Council, as early as 1947 the Branch invested in the training of pathologists at Dr. Papanicolaou's own Cornell University Medical School; Columbia University; University of California-San Francisco, where Papanicolaou's collaborator, Dr. Herbert Traut, had joined the faculty; and the University of Oregon Medical School and Tulane-Louisiana State Universities. (39)

It was perhaps when the Branch began to support the training of paraprofessionals that it first ran counter to prevailing opinion--and made some lasting enemies. Bolstering medical, dental, nursing, and public health cancer education was one thing; promoting the performance of a traditional medical function by a person with no more than a high school education was another. The use of paraprofessionals was a venture into controversy.

The Branch began to invest as heavily as possible, given competing priorities, in cytotechnician training only in the early 1950s. (The American Cancer Society also encouraged its local Divisions to do similarly and a number responded.) Hiding the training component within a more substantial federal grant to demonstrate the reliability and efficacy of the Pap smear was probably the most useful strategy Kaiser and Deibert could devise to insure that some reservoir of cytotechnicians, supervised by willing pathologists, was slowly becoming established in the nation. Throughout this period, Kaiser and Deibert were keenly aware of the need for cytology manpower; they managed to achieve some measure of progress while avoiding direct confrontation with resistant pathologists.

The Branch consistently originated courses and educational materials for various health professionals and produced promotional films. Many of these were undertaken with the American Cancer Society, in that unique arrangement Kaiser and Dr. Charles Cameron, then ACS Medical and Scientific Director, evolved in the late 1940s.

The National Cancer Institute took the position, first, that it was inappropriate for government to endorse any specific aspect of health information which would intrude on private physicians' professional perquisites. Second, the NCI realized that it had no "name identity" to the public. Finally, public education was clearly the primary mission of the American Cancer Society and an area where their expertise was affirmed. Typically, this was the arrangement in making a film: The NCI would hire the writers, dictate the viewpoint and provide the scientific facts. The material would be given in-house review and approval. The ACS would arrange and pay for film production and dissemination. For example, the ACS could attract a major film producer or advertising agency to donate some

or all requisite production services, thus cutting costs. Both the ACS and NCI would be identified as the film sponsors.

"The public had never heard of the NCI, before we joined hands with the ACS," Kaiser has said. (40) The formula with the ACS worked so well that he promoted the concept with the American Society of Clinical Pathologists. Again, Kaiser hired the writer, and the Society insured that the articles promoting cervical cytology and other cancer control activities would appear in their scientific journals. (41)

A high point of professional education was the National Cancer Conference, launched in 1949 as a joint enterprise between the NCI and the ACS. The Conference was held subsequently every four years from 1952 through 1972. Joint sponsorship and joint planning have cemented the relationship between the NCI (or whatever Cancer Control Program locus in the PHS was operating at the time) and the ACS. Organized medicine does not appear to have objected to this forum, which was designed to elucidate current concepts in cancer diagnosis and treatment for the average medical practitioner. In the early years, the presentations were focused more on public health issues and program stimulation; in recent years, as the widespread practitioner interest in cancer has been aroused, clinical management and research topics have dominated the three-day session. The conference is covered by medical writers of major U.S. media; the proceedings are published; and a number of the presentations eventually find their way into the scientific press. What the actual impact of the conference is on practitioner enlightenment and behavior is unknown. About 1000 physicians and scientists attended each conference. In recent years, AMA continuing education credit has been given.

Public Education

Using the American Cancer Society often as its entree to the public, the Branch verged into public education using conventional pamphlets and other traditional public educational techniques. Perhaps the major public educational product of the period was a film on breast self-examination. Produced in 1948, it premiered at the Nurses' Biennial Convention in May, 1950, and concurrently at the Fifth International Cancer Congress in Paris. The film was given its first general showing at the June, 1950, annual convention of the American Medical Association. Showings were arranged for federal employees and women's groups in the next several months, and by October, 1950, the film had been distributed to every state and territorial health department. The film was promoted by student groups, veterans, and industrial workers; it was entered in several foreign film festivals; prints were sent to 30 U.S. embassies through UNESCO, and were seen in regions as remote as the Arctic and Indonesia. "At all meetings where the picture is shown," Kaiser wrote, "physicians, nurses, or other well-informed persons discuss the subject of breast cancer and answer questions from the audience. Records of such questions are kept, and they have proved to be valuable indexes of the level of information about breast cancer and cancer in general." (42)

Over seven million women eventually saw the film in four-and-a-half years, one-and-a-half million in 1953 alone. (43) Showings began with small groups, but eventually were held in major movie houses. One thousand prints were sold, more than four times the sale of any previous film in the public health field. (44)

Later, the Branch applied some research to the venture. The goal

was to saturate 300,000 of the 590,000 women in the state of Iowa who were over age 35. The campaign was entitled "A Life a Day Saved." The film was shown, county by county, for two years. "When snows blocked the roads in the winter of 1951, women rode farm tractors to schoolhouses and halls to see it," Kaiser wrote; (45) 289,000 women--96 percent of the goal--saw the film, an estimated 49 percent of the total female population in Iowa over age 35. (46)

A 3000-woman sample was drawn and 1300 responded to the questionnaire. Of the respondents, 80 percent identified themselves as housewives; only 20 percent of them lived in cities. Ninety-two percent reported doing breast examination at least initially; 47 percent claimed to have continued the practice.* Nine percent found some abnormality--and seven cancers were actually found, first recognized by the women themselves. (47)

The Yale School of Public Health made an evaluation of breast self-examination practice among a sample of New Haven women residents and among Federal Security Agency employees in Baltimore in 1952, after the film had been widely shown. Of 2400 respondents, 80 percent claimed to be examining themselves after seeing the film--compared to less than 8 percent who were doing so prior to seeing the film. In the second sample, 33 percent of the 1900 women claimed they were continuing to do breast self-examination monthly. (48)

A second film, Challenge-Science Against Cancer, was sponsored jointly by ACS and NCI, and in 1950, the Branch produced a film with the Canadian Department of Health, Education and Welfare, aimed at

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*The author has found no evidence of long-term follow-up.

motivating high school and college students toward careers in science and cancer control practices. The Branch commissioned for general distribution a book, The Challenge of Cancer, by author Lester Grant, (49) and in 1955, a film, The Warning Shadow, was produced by ACS and NCI to promote periodic chest X-rays of males over age 45. ACS and NCI also handled hundreds of thousands of public inquiries about cancer--today tasks still undertaken by ACS, NCI's Office of Cancer Communications, and individual comprehensive cancer centers.

Although a Professional Education Section was established within the Branch in 1947, most of the Branch's successful professional education pursuits were done in alliance with the American Cancer Society. For several years, the Branch sponsored publication of Cancer Bulletin, which, Kaiser claimed in his 1957 article, once had a circulation second only to the Journal of the American Medical Association in reaching American physicians. State health agencies were urged to use some of their subvention funds to distribute the periodical free to physicians, but, that tactic failing and circulation declining, Cancer Bulletin was discontinued. The gap was readily filled by the American Cancer Society. Their publication, Ca-Bulletin of Cancer Progress--conceived to reach the same target audience--steadily increased in circulation.

Radium Loan Program

Mandated by the National Cancer Institute Act, the Radium Loan Program was administered by the Cancer Control Branch, and successor Field Investigations and Demonstrations Branch, until it was transferred to the Bureau of State Services. During the war years, loans decreased, as there were fewer trained radiologists available to use radium. But during

that same period, better methods were developed to protect persons handling radium. A 1940 survey of handling and storage practices in the borrowing hospitals led to appointment of an Advisory Committee on X-ray and Radium Protection. That body recommended lowering the dose-tolerance levels. (50) The National Bureau of Standards continued to store and maintain measurements and standardization of radium for the Branch. In 1957, Kaiser reported that 57-60 institutions in 29 states and the District of Columbia were users of radium. No charge was made to patients. Thousands of American cancer patients had been treated with the precious eight grams in circulation. Upon application, hospitals were selected according to the training and experience of staff, equipment, and facilities, community need, and numbers of cancer patients to be treated. Loans were renewable annually. A remaining 1.5 grams were in use at the Public Health Service Marine Hospital, Baltimore, which eventually became a cancer clinical treatment center for NCI. (51)

State Health Agencies

An accepted function of the Cancer Control Branch, and its successor agencies, was to assist state health agencies in mobilizing cancer control activities. It was here that so much potential was early recognized, but too little actually done. Some states were already more aggressively pursuing cancer control than the federal government when the 1937 National Cancer Institute Act was passed. New York and Massachusetts were particularly highly regarded for their programs. The point was not to stifle any of these programs, but, where established, to reinforce them with additional resources and technical assistance.

Because of great variation in programmatic capacity among the states, carrying cancer control into the postwar state health agencies was a major undertaking.

The first federal assistance funds for cancer control activities came in 1935, when pursuant to Title VI of the Social Security Act, funds were appropriated for cancer control activities in 15 states: Colorado, Connecticut, Georgia, Iowa, Louisiana, Massachusetts, Michigan, Minnesota, New Jersey, New York, Oklahoma, Pennsylvania, South Carolina, Texas, and Washington. With passage of the 1937 National Cancer Institute Act, and specified earmarked sums appropriated from 1946 on, federal support was clearly established. A Cancer Control Section was established in 1946 in the Division of State Relations of the Public Health Service; in 1947, the Section was moved to the NCI and was absorbed into the Cancer Control Branch. Throughout the years to 1957, Kaiser writes, "the Branch [Cancer Control] worked closely with the parent Division, now called the Bureau of State Services." (52) The Division of State Relations--later Bureau of State Services--had characteristically performed all fiscal audits and accounting while the Cancer Control Branch was responsible for program implementation.

In 1946, no state matching monies were required to receive federal subvention funds. But from 1947 forward, states were to match each $2 of federal subvention monies with $1 of state monies. The federal formula award was predicated on four criteria: (1) 35 percent reflected the extent of the cancer problem in that state; (2) 30 percent the actual financial need of the state; (3) 30 percent was based on the population within the state; and (4) 5 percent on the population density of the state. (53)

The use of the monies was flexible. Local interest and assessment played a large role in whether the funds were expended on establishing new cancer clinics, nursing services, statistical studies, tumor registries, professional education, public information, diagnostic hsopital services, tissue diagnostic services, public health worker training in cancer, or simply to pay the administrative costs of managing these activities. The annual federal subvention contribution in 1946 was $2.5 million. It rose to $3.5 million in 1950 and 1951, but declined to $2.25 million from 1953-57.

Attempting to stimulate interest in these funds and Cancer Control Branch objectives, Dr. Deibert reported to the National Advisory Cancer Council in late 1950 that the Association of State and Territorial Health Officers had approved the following resolutions:

> The Association urges State and Territorial health officers to employ their unique resources to effect studies in environmental substances which may be one of the reasons for the increase in cancer incidence.
>
> The Association urges that maintenance of cancer registers be considered only where the dual purpose of serving as a basis of local cancer service programs and supplying epidemiological data can be utilized....
>
> The Association recognizes the potential danger... of fluoroscopic shoe-fitting machines, especially in untrained hands....(54)

It is not clear whether these resolutions were translated into systematic action, but since consultation by Cancer Control Branch staff was available and readily provided, some progress was probably made in these areas.

Cancer control program guidelines were stated in successive editions of Cancer Services and Facilities, compiled by the Branch. (55) A Cancer Newsletter was published for several years, aimed at state health agency personnel in cancer control. Sixteen medical officers were oriented

in clinical cancer and cancer control; some of them stuck with the subject and became PHS regional consultants or joined state health agencies. Two publications--Suggested Activities for State Cancer Control (1948) and Public Health Officers Manual (1952)(56)-- were developed by the Branch to facilitate communication.

One aim was to establish full-time cancer control directors in state health departments. From 1945-50, official cancer control programs grew from 18 to 52--one in each state and the four territories. But the total number of full-time directors reached only 36. By 1957, Kaiser reported that only a few such program personnel were devoting full time to cancer control in state health agencies. (57) Recruitment was difficult. Competition with other categorical disease control programs was keen. Personnel were expected to double up: typically a health department could afford one or two medical officers for all chronic disease control, and heart, diabetes, and other programs were fast offering federal financial incentives nearly equal to cancer control potential.

In early 1954, the formula system for categorical program support to states was threatened. Surgeon General Leonard Scheele reported to the National Advisory Cancer Council that categorical formula funds might be eliminated. Instead, previous categorical program funds would be aggregated, given as "general" assistance, so individual states could choose how to invest these federal funds. Additional special project grants would be available to states to demonstrate "methodology of value to the entire country and for preliminary trials of short duration," Scheele explained. But "whether the states spend it for cancer would depend on their interest....[T]he state divisions of the American Cancer

Society could keep pressure on the state health departments...," he proposed. (58) This proposal, which would have truncated cancer control activities in a number of states, was not sanctioned by Congress. About 12 years later, however, categorical formula grants to states were obliterated with the implementation of the Comprehensive Health Planning Act.

Consultation was given directly to states until a regional Public Health Service reorganization in the mid-1950s. Then, the pattern was for information and consultation from the Branch to go first to regional staff and then to the states. Whether this diluted the program effort is not known. Presumably, if a regional cancer control officer knew his territory well, and knew the resources of the Branch, considerable guidance was possible.

Some states, such as California, Massachusetts, and New York, demonstrated considerable resourcefulness, especially if an aggressive, committed individual in public health was speaking for cancer control. These states spread the subvention monies around effectively to stimulate and improve cancer detection and diagnostic services, surveillance, and tumor registries. Other states, lacking in leaders, may have recognized the needs or the potential, but they simply offered the funds without much guidance or used them internally to reinforce limited health department cancer control capability.

A hopeful prospect for a decade or two was the Public Health Cancer Association. In the late 1940s, Deibert had mobilized a National Cancer Control Committee, including state health department personnel. The Committee became the Public Health Cancer Association. It was an inert body, Kaiser feels on reflection 25 years later. (59) It continued until 1974,

chiefly as a "meeting ground" at annual American Public Health Association meetings. "We tried to bring it into a force that would bring more attention to cancer control and the need for it--and also more appropriations for the public health segment...." (60)

Kaiser suspects that the lack of a vocal constituency--the Public Health Cancer Association never lived up to expectations in this regard--was only a symptom of the larger problem in mounting uniformly productive cancer control programs within states. Funds alone would not do it, although those funds did tend to increase over time. Kaiser said:

> First, I don't think the public had been educated to the point where they would demand services. Second, we didn't really have the diagnostics of any sort that would tell if a person really had cancer in his body someplace. (61)

Consistent with Kaiser's observation, the fact was that with the exception of the Papanicolaou smear, little emerged in over a decade to detect cancer in other anatomic sites early in its course.

Nursing Services to States

A Nursing Section was established in 1947. Following a 27-state survey, the nursing consultant, Miss Rosalie Peterson, organized programs to help local nursing organizations master detection techniques and resolve some of the administrative and service aspects of cancer patient home care. The objectives were to: extend knowledge of the disease, stimulate better case-finding methods, reduce the time between onset of symptoms and report for medical treatment, help states to develop adequate follow-up systems on cancer patients, and improve nursing care for cancer patients. It was a major challenge, considering her responsibilities for nursing education and the availability of a very limited staff. In 1948,

the Nursing Section assigned one nurse to the state of Washington and another to Maryland, where extensive in-service education and bedside nursing skills were taught in one county. (62) In 1950, the Section sponsored a three-week cancer nursing education course, attended by 3000 nursing supervisors from 30 institutions. (63) "Cancer Nursing in the Basic Professional Nursing Curriculum," a monograph, was compiled in 1950; (64) course content for teaching and consultation was generated. A reservoir of state directors of public health nursing were schooled, in regional institutes around the nation, to conduct cancer nursing courses in their own regions. (65)

Nursing research began to assume importance on a very small scale: three modest surveys were conducted of home care and cancer nursing educational needs, another on cancer nursing attitudes, and another on the role of the nurse in vaginal cytology services. (66) But there is little evidence about the impact of these efforts.

Many efforts were made in collaboration with other agencies. An extramural grants program in nursing education was of some aid. The Cancer Nursing Manual, issued in 1950 and 1955, (67) was widely used in the United States and translated into other languages.

Detection and Diagnostic Aid Research and Propagation -- Cytologic Field Studies

The search for practical early detection and diagnostic means was a consuming aspect of the Branch work. The authority came from the National Cancer Institute Act itself: "to conduct, assist and foster researches." Close to 35 percent of the Branch budget in some years could be expended on special projects, (68) encompassed under various

bureaucratic names as Technical and Demonstrations Section (1947), Field Studies Section (1950), General Field Studies Section (1953).

As early as 1947, a pilot research project in vaginal cytology was begun at Hot Springs, Arkansas, Dr. Deibert's former VD control center. In 1951, the project was moved to the Department of Pathology, University of Tennessee Medical School. The Memphis-Shelby County Project, as it came to be known, "included the study of the general female population, in order to obtain epidemiologic data on the efficacy of the cytological method (Papanicolaou smear) and information on early detection of cancer in a curable stage and prognosis in treated cancer." (69) By 1956, Congress had mandated a Cytology Section, with field projects mounted in Columbus, Ohio, Madison, Wisconsin, Washington, DC, Philadelphia, Pennsylvania, Houston, Texas, San Diego, California, and Louisville, Kentucky. (70)

The Cancer Control Branch struggled for many years to overcome professional resistance to the widespread application of the Papanicolaou smear. (See Book One, Chapter 4.) Eventually, Kaiser recalls, using his own access to the American College of Surgeons' Cancer Commission, it was a "divide and conquer" situation to get the cervical cytology demonstration programs launched.

Kaiser approached some of the "activist" pathologists whom he met through the American College of Surgeons. (71) The Cancer Control Branch and the American Cancer Society underwrote substantial budget for the College program of inspection and stimulation of hospital-based cancer clinics and programs. The clinics required the active involvement of pathologists. Kaiser had funds to establish cervical cytology demonstration screening programs, and several enlightened pathologists seized

the opportunity. Kaiser wanted to train non-pathologists to examine slides, referring questionable ones to supervising pathologists. "It just brought me into conflict with the College of Pathologists, who insisted that these people be more overtrained than undertrained, be people with 'background.' So we developed a large operation at Shelby County to train cytotechnologists." (72) Emphasizing the calculated nature of the strategy, Kaiser added, "Every screening center we established after that had a training component." (73)

The selection of Shelby County was based on several curious circumstances. Douglas H. Sprunt, the University of Tennessee pathologist, did have the respect of his community medical peers--gynecologists, internists, other pathologists. He also had a personal dislike for the conservative pathologists whose control of the College of American Pathologists was so pervasive. (74)

The Shelby County demonstration program established an unusual model for federal-grantee relations. At one time, Kaiser believes, as many as 80 of the Shelby County Project staff were federal civil service employees of the Cancer Control Branch, stationed at the Project to supervise training, evaluate the program, and provide technical assistance not otherwise obtainable in the Memphis area. The deploying of NCI Branch personnel was a strategy adopted in several other demonstration projects around the nation--a stimulus to get projects rolling where local technical resources might be deficient--and where the total Branch annual grant funds were constrained. This augmentation device was doubtless known to members of the Cancer Control Branch Advisory Committee and approved by them.

In mid-1957, just as a segment of the Branch activities was being removed to the Bureau of State Services, USPHS, the Branch arranged with the International Ladies Garment Workers Union of New York City to conduct a cervical cytology study, with the specimens being processed at the Washington Cytology Unit.

"The membership of this Union," Dr. Kaiser explained to the National Advisory Cancer Council, "includes a large number of Jewish women, as well as a number of Puerto Ricans, Irish and other nationalities. A check of this study with others that have been made on racial groups will provide a practical investigation into the possible incidence and variation of cervical cancer in racial groups." (75)

Kaiser also announced at this time that a cervical cytology study was being initiated among Philadelphia industrial groups in conjunction with staff at the Women's Medical College of Philadelphia. (76)

Further pursuing the value of exfoliative cytology, special projects were funded in pulmonary cytology research. The M. D. Anderson Hospital staff engaged in this problem found the application of exfoliative cytologic principles to lung sputa complex--and the actual site of the lesion next to impossible to pinpoint. (77) Two other centers, Ohio State and the University of Chicago, set to work on the problem with no more optimistic results.

Detection and Diagnostic Aid Research and Propagation--Single Diagnostic Test

The search for a single diagnostic cancer test, spurred by rising public anxiety about cancer, siphoned considerable Branch Special Project funds from 1948-59. The idea was not the public's alone nor that of Congress. Dr. Kaiser has said, "I must admit that a fair share of the

enthusiasm came from me personally...but we were operating as a team." (78) One of the more salient decisions was to allocate funds to evaluate the efficacy of such diagnostic tests. The Dunn-Greenhouse monograph (79) on how to evaluate such tests undoubtedly kept some of the exuberance in check. It spelled out the criteria by which diagnostic tests were to be judged. The impetus for the search was the work of Dr. Charles Huggins, "Thermal Coagulation of Serum Proteins," (80) published in 1949, and a conference sponsored by the Branch in late 1948. (81) Huggins had pioneered in clinical studies of hormonal manipulation related to cancer. He thought the presence of a certain level of iodoacetic acid in a person's blood could suggest the early signs of cancer. He and collaborators Miller and Jensen devised a test to inhibit the coagulation of serum protein and to develop an iodoacetate index--a range of clinically perceptible reactions.

As Huggins said, with feeling, at the 1950 conference,

> We believe that specific tests for cancer are possible. We believe that human cancers usually produce changes in the plasma proteins....We believe that the present methods have very great utility in clinical medicine, and I know that you scientists can make them elegant, clean them up.... (82)

The Cancer Control Advisory Committee and the National Advisory Cancer Council approved the Branch efforts to stimulate national interest in a single cancer diagnostic test and, further, to evaluate efficacy. According to Kaiser, "There was skepticism on the part of the pathologists represented, but they were of the opinion it ought to be given a fair trial." (83) A clinical trials unit was established at the University of Washington in 1949 and moved to Bethesda four years later. Five university research projects at first, later reduced to three, were established;

sizeable grants and contracts were let to these centers and other investigators to assess the merit of the Penn Test, the Bolen Test, Menkes "Pentolysis" Reaction, the Black Test, and others.

The atmosphere surrounding the search was generally one of optimism. As early as 1951, Kaiser reported to the National Advisory Cancer Council that "no test or group of tests have emerged as an answer to cancer diagnosis. The serological test and the cytological test continue to be of interest." (84) Here, one realizes that the cytologic test for detection of cervical cancer--and possible early detection of cancers in other organ sites--was then perceived as simply one of the tests under scrutiny; it was not yet accepted as sufficiently efficacious that it deserved widespread dissemination. In fact, at this same meeting, Dr. John Dunn was asked to respond "as to the value of the cytologic test." He explained that "the main interest in cytology as a diagnostic procedure was for the physician's use in his office. It is not a question of cytology versus biopsy but a question of providing the physician with a simple test to be used when there is no symptomatic suggestion of cancer." (85)

NCI Director Heller concluded the discussion by commending the investigators in the diagnostic test program--which encompassed the Memphis-Shelby County effort. "[T]he evaluation of cancer tests is thankless work since most results are negative." But, he added, "an attempt is being made to publish those negative results in a systematic way in the Journal of the National Cancer Institute." (86)

Four years later, in June, 1955, Dr. Kaiser submitted an extensive summary of the cancer diagnostic test search to the National Advisory Cancer Council. He divided the hundreds of cancer tests advocated in

the previous eight years into three groups: the measurement of some product of the cancer; the measurement of some change in the body resulting from the cancer; and the measurement of some change in the body which favors the development of a cancer. Generally, these qualitative and quantitative changes might be found in serum proteins, by immunologic measures determined by precipitation and flocculation tests, in neuromuscular or physical tests, enzyme determinations or cytologic tests. (87) Kaiser explained the curiosity of grouping the cytologic test for cancer into the more diffuse diagnostic test search:

> The one major exception to this rather discouraging report on cancer diagnostic tests is the cytologic test for cancer....As you know, our use of the cytologic test in Memphis has been limited to the female genital tract.
>
> At present, secretions from the breast, prostate, lung, stomach, esophagus, genitourinary tract and exudates from the pleura, peritoneum and pericardium are being studied by this technique....We propose to [apply the cytologic test as a screening procedure for cancer of some of the sites] ...and at the same time expand the use of cytology as a screening procedure for uterine cancer. (88)

Indeed, with additional congressional appropriations to expand the cytologic screening program, and research projects exploring cytology to detect large bowel cancer at Ohio State Medical College and lung cancer at M. D. Anderson Hospital, the only fruitful avenue of diagnostic testing appeared to be cytology. No less a clinical scientist and cancer research advocate than Dr. Sidney Farber made "an extensive plea...for an intensified research program within the Field Investigations and Demonstrations Branch in the field of diagnostic tests for cancer." (89) The rationale, Farber said, was to facilitate early diagnosis. "...[T]his is particularly true if the chemotherapy

program* is to be completely effective." (90)

Medical and congressional aspirations notwithstanding, the performance of all these tests for case-finding in the general population was uniformly unreliable. Not one had a consistent degree of specificity. Dunn summed up the atmosphere surrounding the search in 1953:

> In general, attempts to find a diagnostic test for cancer have met with an attitude of pessimism since the body of cancer research knowledge has apparently not yet established a firm basis for development of such a test. On the other hand, those faced with the urgent demand that something be accomplished now to reduce human cancer mortality are confronted with the necessity of taking calculated risks. (91)

It took nearly ten years for this exercise to run its course.

In many ways, the search for the single cancer diagnostic test was Kaiser's personal Waterloo with cancer control: the tests proved to be without value; some of the proponents were not schooled in scientific method; some of the evaluators lost credibility with their peers for even "dabbling with such nonsense." (92) Furthermore, the scheme ran counter to the philosophy of Dr. James Shannon, who took over direction of the National Institutes of Health in 1955 and who freely expressed his preference for "pure" as opposed to applied research. (93)

However, the quest for diagnostics continued through the 1950s. It became concentrated within the Field Investigations and Demonstrations Branch and was the central focus of the Diagnostic Research Branch, which Kaiser directed until he left the National Cancer Institute in 1962. The setting in which these studies continued was a laboratory in Hagerstown, Maryland, a serendipitous gift to the National Cancer Institute.

In the mid-1950s, Kaiser dispatched Mr. Pope Lawrence, a radiation

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*Cancer Chemotherapy National Service Center to screen and evaluate therapeutic drug compounds.

engineer, to investigate what appeared to be an epidemic of radiation-induced cancer in the residents of Hagerstown. This community had been a public health research center for over 30 years. Since 1921, families living there were surveyed periodically as part of longitudinal investigations of chronic disease incidence and clues as to etiology. This relatively stable population was studied in depth to determine if disease could be linked to genetic, familial, or environmental factors. Cancer records had been maintained, for example, on three generations of 450 selected families. (94)

Lawrence ascertained that many of the buildings in Hagerstown were emitting low-level radioactivity. The buildings were made of locally-produced bricks, and radiation was found to be inherent in the Hagerstown soil. The relatively stable Hagerstown population had, unwittingly, been consistently exposed to this carcinogenic source. Their cancer risk and incidence increased.

Lawrence got to know the people in Hagerstown quite well. He was there often, seeking the source of the local cancer epidemic. In going about his work, he became friendly with the town's undertaker, a man whose wife had succumbed to lung cancer. The man wanted to do something for cancer research. So he provided funds to build an epidemiological laboratory in Hagerstown, not too many miles from Bethesda. Kaiser authorized funds to equip and staff the laboratory. "Here we had a going operation to investigate this abnormal occurrence of lung cancer in a defined population." (95) But upon learning of these developments, NIH Director Shannon was incensed. (96) He had not authorized the laboratory. Moreover, Shannon was already preparing to move some Cancer Control activities out of NIH.

But the Hagerstown lab was a fait accompli--a genuine gift to the National Cancer Institute. Kaiser assigned Drs. John C. Pruitt and Albert Hilberg to the Hagerstown Laboratory, to pursue the search for a single cancer diagnostic test using peripheral blood. (97) The Hagerstown Laboratory was the site of other Branch activities, such as the development of an automated cytologic scanning machine to replace human cytotechnicians. (98)

Although cytotechnicians were being trained in three six-month training cycles, demand far exceeded supply. Extensive support of cytotechnician training did not begin until 1956; by that time, two prototype cytoanalyzers were projected to be tested, one in Memphis, the other at New York's Strang Clinic. (99) These mechanical readers ultimately proved not to be efficacious.

Pruitt and Hilberg were pathologists (as were a number of cancer control workers such as Wilhelm Hueper, Kenneth Endicott, and Sidney Farber). They had credibility, Kaiser believes, with the College of American Pathologists.

Although the Branch had consistently supported cytotechnician and pathologist training programs in cervical cytology from 1947 forward, prospects for making this service available in a mass periodic screening fashion were still dim in the mid-1950s. Pathologists were not as opposed to the notion of automating the Papanicolaou smear system as they had been to reading the slides individually. They assumed, astutely, that they would own such automated systems, and it could be profitable. "Pathologists wanted to control all cancer control activities," Kaiser recalls. "They knew no one could do without them. After all, you can't diagnose cancer without a pathologist reading the tissue." (100)

Not being a pathologist, Kaiser feels, aroused his own feelings of hostility. The Cancer Control Advisory Committee usually had two or three pathologists as members and at least an equal number of public health department physicians--Herbert Lombard, Gaylord Anderson, Matthew Griswold. The public health men and the pathologists never openly quarrelled, Kaiser recalls. "It was just sort of an underground feeling of resistance. It was my idea if we could get them to join us [public health men], we might be able to get some reconciliation, a little softening of the attitude." (101)

In a sense, the quest for a single diagnostic test and unsuccessful experiments to develop a cytoanalyzer inhibited widespread propagation of cervical cytology technology--and provided justification that the cancer control program had strayed into areas where its expertise was limited and its contributions apt to be minimal.

Reflections on the Period 1946-57

What happened to cancer control in this formative period? First, for several years Cancer Control achieved a tangible identity. It emerged as a program with defined dimensions, rising expectations, and considerable potential. The federal program took its direction from the 1937 statute and its leaders interpreted its mission along lines authorized by law. Backed by ample resources, it was a potentially systematic federal approach to cancer control through mobilization of professional, state, and voluntary agencies.

Perhaps the greatest attribute of the federal Cancer Control Program was its flexibility. While there was only marginal leeway in redirecting earmarked appropriations from one specific program component to another,

for example, from radium loan to clinical traineeships, there was greater flexibility in the way states could expend their subvention funds. Each state was urged to identify its own needs and to distribute its own subvention funds to meet those needs; no fixed proportion or dollar amount had to be expended on registry or surveillance systems, nursing services, or any other specific activity. This permitted those states previously laggard in cancer control to focus some attention on it and to determine how best to expend these new funds. For those states already receiving substantial support from their own legislatures, such as in New York and Massachusetts, federal funds could have two possible effects: to diminish the state's own investment in cancer control or to augment it. In both New York and Massachusetts, for some years at least, the federal component was additive.

Flexibility was also demonstrated in relationships with the American Cancer Society and several professional bodies, chiefly the American College of Surgeons. Joint endeavors between the American Cancer Society and the National Cancer Institute were developed in this period, including the joint sponsorship of activities, and the reciprocal benefits of ACS advocacy of greater congressional appropriations to NCI.

Similarly, the American College of Surgeons found the Cancer Control Branch supportive of the College's Commission on Cancer program to stimulate and evaluate hospital-based cancer programs. With combined federal and American Cancer Society funds, the College was able to cover much more of the nation than otherwise possible; and the NCI and American Cancer Society had a direct but subtle voice in influencing the quality standards of the College program.

Another aspect of the federal program was support of professional education and training. The results were impressive. A coterie of proficient oncologists began to emerge through emphasis at the graduate and postgraduate levels. No one could fault the federal initiative to strengthen manpower resources for health services; it was one of the glaring deficiencies which provoked passage of the National Cancer Institute Act originally. This drive lasted until Congress began to wonder if the public investment in training was becoming a funnel for private enrichment. Former NCI Director Heller said:

> There was a growing attitude on the part of Congressmen that...clinical training, at least, should be curtailed. There seemed to be resentment on the part of many Congressmen to provide funds to allow this young doctor to...perfect himself in oncology and come back and charge fees that would enable him to have two or three Cadillacs. (102)

The initiative of the Branch to invest in demonstrations of various early detection techniques, in general, was promising. Without some directed, evaluable demonstrations of the Papanicolaou smear, for example, it is doubtful that this technology would have become widely available or applied--certainly not to low-income women at highest risk of cervical cancer. The Branch looked for good ideas and encouraged scientists and program administrators to be resourceful.

But in retrospect, the search for a single cancer diagnostic test seems to have been obsessive. It drained away considerable Special Project funds in a lengthy, fruitless search for a shortcut to cancer control. To a degree, the entire venture was responsive to the congressional preoccupation with short-range solutions to a long-range chronic disease problem.

The federal program did establish some focus on cancer control. The end-result was that many of the nation's capabilities to engage in cancer control--at least the organizational forces--were strengthened. For perhaps five years, 1948-53, the very commonality of interest was potentially powerful. Congress, health professionals, and the public at large were made aware that some cancers could be avoided or morbidity reduced by application of early detection. Several control means were identified and tested. Some, most notably the Papanicolaou smear, were eventually made available to a receptive public.

But, during the 1946-57 period, there were forces holding back progress as well. Ironically, some of the inhibiting factors were inherent in the newness of the challenge. Kaiser and others thrust into program leadership originally thought they could readily take venereal disease concepts and apply them to cancer control. "That turned out to be a mistake," Kaiser realized early. "Actually, there was very little we could apply to control because we didn't have cancer detection procedures and methods that really worked." (emphasis added) (103) The lack of technological advances and etiological clues impeded cancer control. In 1947, there was still no body of individuals technically or administratively able to mobilize any chronic disease control program. There were no useful programs for cancer control to emulate. Cancer control itself had to be the model.

Technological and scientific limitations certainly inhibited progress. The concept that cancer was conquerable in the same way poliomyelitis proved to be in 1955 was fallacious in 1947--and in 1957--and remains dubious in 1977.

The integration of the Papanicolaou smear into widespread application was slow. Intervention programs were developed painstakingly, with appeasement to antagonistic pathologists. There was no crash campaign to demonstrate the Papanicolaou test as there was to disseminate the Salk polio vaccine, but rather a steady momentum of cultivation.

The full, rapid integration of research findings from environmental and occupational areas was hampered by financial resources, but perhaps even more by the quality of research, the lack of certainty over the findings, and the personalities who dominated the field. There was a failure to recognize the significance of epidemiological evidence, together with a lack of regulatory authority to control suspect carcinogenic agents produced in industry.

A major factor holding back cancer control was competition with cancer research. Increasingly large appropriations for intramural and extramural cancer research seemed to stifle the original life force of cancer control. If advocates for cancer research and treatment--Mrs. Mary Lasker and Dr. Sidney Farber--had been as vocal in the name of cancer control, the movement surely would have been more vital. The history reveals that few advocates appeared other than the American Cancer Society, and that agency, too, was committed primarily to support for cancer research. The Public Health Cancer Association never became a convincing advocate for cancer control.

In the natural course of events, other detractors appeared. Cancer Control lost its name identity when most of its original activities were masked by the title (1953-1960) Field Investigations and Demonstrations. Bit by bit, segments of the original Cancer Control Branch were set free of "mother," and allowed to grow as independent units: Biometry, Epi-

demiology, Environmental Carcinogenesis. The burgeoning growth of the National Cancer Institute proved counterproductive to Control, since increasing appropriations and attention were placed on research. By 1957, competing research and control programs concentrating on heart disease and mental health had been established. The National Cancer Institute had been a good model, such advocates found. But no single Institute of Chronic Diseases was established; rather, individual categorical disease institutes prevailed.

By 1957, there were still too few persons around the nation experienced in or committed to chronic disease program planning or administration, let alone cancer control exclusively. The Public Health Cancer Association, although it attracted some dedicated epidemiologists and health officers, never had the stature to influence nationwide program planning or appropriations. By 1957, the Association was foundering.

Leadership certainly played a part in the course of events. Leonard Scheele and Rod Heller, as National Cancer Institute Directors, were sympathetic to cancer control. Heller still carries the soubriquet "Mr. Cancer Control" to some of his co-workers. But, given the mounting pressures from Congress, medical schools, and forces of organized medicine, cancer control as an entity was no match for cancer research. Further, one has to consider that the spectrum of activities originally pursued by cancer control--research, surveillance, training, state services, radium loan, professional and public education--may have been too diffuse for all segments to prosper.

The question arises, for the period 1946-57, was cancer control a planned program, or was it "everything except research?"

Cancer control became a prime target once Dr. James Shannon became Director of the National Institutes of Health in 1955. His management philosophy did not call for close Institute ties with states, the professions, voluntary agencies, or even industry, although he himself had come from research management in the pharmaceutical industry. His plan was to mount a national effort to bolster biomedical research, both intramurally and through America's institutions of higher learning. Shannon's philosophy so dominated the National Institutes of Health that it was inevitable that anything that got in the way of his plan would be forced out. He succeeded in developing a second echelon of Public Health Service Commissioned Officers: the pure intramural researcher. These researchers in time became segregated from the Public Health Service "old school" and regarded themselves, some say, as elite. They did not come up through the ranks of sanitary engineering or communicable disease control--and they surely were not accustomed to working through public health agencies for implementation of their findings. They were scientists, hand-picked and cultivated to produce high quality research, which ultimately would have an impact on personal health. Within a few years of Shannon's new leadership, two "camps" could be discerned. They vied for congressional and public interest--and, in general, the National Institutes of Health "camp" fared far better.

If NIH was to be exclusively a research, investigative body, not meddling with organized medicine, Cancer Control as an entity lost its base. Kaiser recalls the Branch name being changed and support for cervical cytology screening demonstrations reduced, because "by then, we had proven the efficacy of the Pap smear...and it was up to another type

of organization, perhaps a public organization such as the ACS, to get this adopted by the practicing physician. This was not necessarily the function of a research, investigative organization." (104) Despite what Kaiser viewed originally as a free hand, he later observed, "I don't think that the clinicians ever really felt that this cancer business was really a function of the public health agencies....We certainly didn't get a fire built under the epidemiologic approach." (105) (Kaiser invested in a cancer epidemiology training program at the Communicable Disease Center for four years--but not a single cancer epidemiologist emerged from this exercise.) (106)

How can the postwar period be characterized? What forces impinged on the federal Cancer Control Program and its potential?

--It was a "boom or bust" period. With increasing control of communicable diseases, cancer control seemed feasible and timely.

--The health field--and the National Institutes of Health in particular--was the darling of Congress, at least for the first half of the period.

--A large number of cancer-aware medical and health personnel were trained in this period, hopeful of making careers in cancer management and control.

--Epidemiological studies and tumor registries did increase fundamental knowledge about cancer incidence and prevalence, and provided clues as to likely causes of various cancers.

--Cancer education of health professionals did take hold, although support for training paraprofessionals was substantially more modest.

--The potential of cervical cytology to detect cancer early was demonstrated. But its application did not progress rapidly, at the pace of tuberculosis control, for example.

--In interpreting the tenets of the 1937 Act, the federal Cancer Control Program took on a diffuse mandate. The activities overplayed cancer management, to the detriment of prevention. Yet there was a constant need to accommodate to organized medicine.

--Cancer control failed to focus sufficiently on primary prevention and early detection, which had been proved so successful in communicable disease control; and organized medicine seemed determined to thwart that possibility. The management of cancer was regarded as an individual, not a societal responsibility.

--Some state health agencies were opposed to categorical funding and the possible erosion of traditional state-local authority by federal mandate. (Resolutions to this effect were adopted by the Association of State and Territorial Officers, but Congress paid no heed.)

--In Congress and elsewhere, the burgeoning biomedical establishment, supported by a well-mobilized constituency, overwhelmed control efforts. This constituency advocated that, if cancer were to be conquered, it would be by research, not control. Consequently, vastly disproportionate federal funds were invested in research training as compared to clinical and epidemiological training. Medical schools joined this constituency, induced by available funds for basic, not applied research.

--The drive for public control of American health resources was roundly defeated with defeat of the Wagner-Murray-Dingell bill for national health insurance. Cancer control, to the extent that it also involved public approaches to health problems, was also set back.

By 1957, internal and external forces had essentially weakened the federal Cancer Control Program. Indeed, by this time, it was not a program, but fragments. Loss of identity, fragmentation, ill-defined program authority and direction, and the inability to generate persuasive cancer control advocates all served to make federal Cancer Control especially vulnerable.

In mid-1957, at the command of Dr. James Shannon, the state subventions portion of the cancer control budget and program was transferred back to the Bureau of State Services, which had been handling the fiscal audits for the program. It was the end of a tumultuous childhood--and the beginning of adolescence.

(1) Interview with Dr. Raymond Kaiser, retired; former Chief, Cancer Control Branch, National Cancer Institute, by Devra Breslow of HCCP, April 2, 1976, San Francisco, Ca.

(2) See note (1).

(3) Deibert, A.V.: Cancer control (2): a comprehensive approach. Hospitals 23:50, May, 1949.

(4) See logs of Dr. Lewis Robbins, 1957-1958.

(5) See note (4).

(6) Heller, J.R.: The National Cancer Institute: a 20-year retrospect. J. Nat. Cancer Inst. 19:147-190, August, 1957.

(7) Kaiser, R.F., Peterson, R.I.: Activities of the Field Investigations and Demonstrations Branch. J. Nat. Cancer Inst. 19:259-73, August, 1957.

(8) See note (7) at 259.

(9) See note (7) at 259.

(10) See note (7) at 259.

(11) See note (6) at 182.

(12) See note (6) at 188.

(13) Mider, G.B.: Research at the National Cancer Institute. J. Nat. Cancer Inst. 19:191-223, at 222.

(14) Dorn, H.F.: Tobacco consumption and mortality from cancer and other diseases. Pub. Health Repts. 74:581-593, July, 1959.

(15) National Advisory Cancer Council. Minutes. November 3-4, 1956, p. 13.

(16) See note (6) at 182.

(17) See note (7) at 271-72.

(18) See note (7) at 270-71.

(19) See note (7) at 271.

(20) National Advisory Cancer Council. Minutes. October 27-29, 1950, p. 18.

(21) National Advisory Cancer Council. Minutes. February 14-16, 1955, p. 6.

(22) National Advisory Cancer Council. Minutes. June 7-10, 1954, p. 9.

(23) Kaiser, R.F.: Cancer control activities of the National Cancer Institute. Pub. Health Repts. 70:10:1029-1033, October, 1955, at 1029.

(24) Kaiser, R.F.: Cancer teaching in medical schools. Pub. Health Repts. 64:757-764, June 17, 1949, at 757.

(25) Deibert, A.V.: Control features of the cancer problem. J. Nat. Med. Assn. 42:279-86, September, 1950, at 279.

(26) Kaiser, R.F.: The cancer program in medical schools: a review. Pub. Health Repts. 65:1397-1402, October 27, 1950, at 1401.

(27) See note (1).

(28) National Advisory Cancer Council. Minutes. June 20-22, 1955, p. 156.

(29) Kaiser, R.F.: The cancer teaching program in medical schools: a progress report. J. Med. Ed. 28:45-47, August, 1953, at 45.

(30) Kaiser, R.F.: Some results of the cancer teaching program. J. Med. Ed. 30:643-645, November, 1955, at 643.

(31) See note (30) at 645.

(32) See note (30) at 645.

(33) Kaiser, R.F.: Results of the cancer teaching program in dental schools. Pub. Health Repts. 70:35-38, January, 1955, at 38.

(34) See note (7) at 267-8.

(35) Kaiser, R.F.: The clinical traineeship program of the National Cancer Institute. Pub. Health Repts. 69:776-80, August, 1954, at 780.

(36) See note (35).

(37) Justice Louis Brandeis (dissent) in New State Ice Co. v. Liebmann, 1932, 285 U.S. 262 at 311, 52 S. Ct. 371 at 386.

(38) See note (1).

(39) See note (3).

(40) See note (1).

(41) See note (1).

(42) Kaiser, R.F.: Special purposes health education program: breast self-examination. Pub. Health Repts. 70:428-32, April, 1955, at 429.

(43) See note (42) at 432.

(44) Annual Report of the Public Health Service, 1951. Federal Security Agency, Washington, D.C., U.S. Govt. Printing Office, at 15.

(45) See note (42) at 430.

(46) See note (42) at 430.

(47) See note (42) at 431.

(48) See note (42) at 431.

(49) Grant, L.: The Challenge of Cancer. Federal Security Agency, Public Health Service, National Institutes of Health. Washington, D.C., U.S. Govt. Printing Office, 1950.

(50) Cowie, D., Scheele, L.A.: A survey of radiation protection in hospitals. J. Nat. Cancer Inst. 1:767-87, 1941.

(51) See note (7) at 264.

(52) See note (7) at 260.

(53) See note (7) at 260.

(54) See note (20) at 16.

(55) Cancer Services and Facilities in the United States. Federal Security Agency, Public Health Service, National Cancer Institute of the National Institutes of Health. PHS Pub. #14. Washington, D.C., U.S. Govt. Printing Office, 1950; second edition, 1954; third edition, 1965; fourth edition, 1968.

(56) Cancer Control: A Manual for Public Health Officers. A Joint Project of the National Cancer Institute, Public Health Service, Federal Security Agency, and the New York State Department of Health. Albany (?), New York State Department of Health, 1952.

(57) See note (7) at 261.

(58) National Advisory Cancer Council. Minutes. February 16-18, 1954, p. 12.

(59) See note (1).

(60) See note (1).

(61) See note (1).

(62) See note (7) at 262.

(63) National Advisory Cancer Council. Minutes. February 16-17, 1950, p. 9.

(64) Cancer Nursing in the Basic Professional Nursing Curriculum. National Cancer Institute. Public Health Service, Federal Security Agency. PHS Pub. #147. Washington, D.C., U.S. Govt. Printing Office, 1950.

(65) See note (7) at 262.

(66) See note (7) at 262.

(67) Cancer Nursing: A Manual for Public Health Nurses. A Joint Project of the National Cancer Institute, Public Health Service, Federal Security Agency, and the New York State Department of Health. Albany (?), New York State Department of Health, 1950; second edition, 1955.

(68) See note (7) at 269.

(69) See note (7) at 271.

(70) See note (7) at 273.

(71) See note (1).

(72) See note (1).

(73) See note (1).

(74) See note (1).

(75) National Advisory Cancer Council. Minutes. June 24-27, 1957, p. 8-9.

(76) See note (75) at 9.

(77) See note (1).

(78) See note (1).

(79) Dunn, J.E., Greenhouse, S.W.: Cancer Diagnostic Tests: Principles and Criteria for Development and Evaluation. PHS Pub. #9. Washington, D.C., U.S. Govt. Printing Office, 1950.

(80) Huggins, C.: Thermal coagulation of serum proteins. Cancer Res. 9:177-82, 1949.

(81) Conferences on Cancer Diagnostic Tests in 1948 and 1949 (unpublished). Reader is referred to Proceedings of the First Conference on Cancer Diagnostic Tests, 1950. PHS Pub. #96. Washington, D.C., U.S. Govt. Printing Office, 1951.

(82) See note (81) at 5.

(83) See note (1).

(84) National Advisory Cancer Council. Minutes. October 22-24, 1951, p. 10-11.

(85) See note (84) at 11.

(86) See note (84) at 11.

(87) National Advisory Cancer Council. Minutes. June 20-22, 1955, p. 212.

(88) See note (87) at 219-20.

(89) See note (75) at 9.

(90) See note (75) at 9.

(91) Dunn, J.E., Greenhouse, S.W.: The development and evaluation of cancer diagnostic tests. Pub. Health Repts. 68:880-84, September, 1953, at 884.

(92) Personal communication between Devra Breslow of HCCP and Dean Sherman Mellinkoff, UCLA School of Medicine, 1976.

(93) Interview with Dr. James Shannon, former Director, National Institutes of Health, by Dr. Arthur Viseltear of HCCP, January 31, 1977, Rockville, Md.

(94) Turner, V.B.: Hagerstown Health Studies: An Annotated Bibliography. Federal Security Agency, Public Health Service. PH Bibliography Series #6, PHS Pub. #148. Washington, D.C., U.S. Govt. Printing Office, 1952.

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(96) See note (1).

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(99) National Advisory Cancer Council. Minutes. March 4-6, 1957, p. 8.

(100) See note (1).

(101) See note (1).

(102) Interview with Dr. John R. Heller, former Director, National Cancer Institute, by Devra Breslow of HCCP, November 4, 1975, Bethesda, Md.

(103) See note (1).

(104) See note (1).

(105) See note (1).

(106) See note (1).

CHAPTER 5

CANCER CONTROL IN DECLINE 1957-1960

The decision in 1957 to move the state subventions segment back to an agency already focused on services to state health agencies was primarily Shannon's. It was not the first National Institute of Health control program to be detached from the Bethesda research "reservation": the Heart Disease Control Program, of less stability and tenure, had been moved in 1956 to the Bureau of State Services.

The previous experience of cancer control in the 1950s indicated that if anything was to be accomplished with state health agencies, let alone the rest of the nation, in the application of cancer research findings, a new organizational and programmatic approach was required. And that new approach would not be sought by the National Institutes of Health.

The Cancer Control Program was moved to the Bureau of State Services within the Division of Special Health Services. It was a physical move: to downtown Washington. It was an ideologic move: to align cancer with other disease control activities traditionally managed by the non-research element of the Public Health Service. It

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Principal Researcher/Writer: Devra M. Breslow

was a programmatic move, although the program components were not clearly defined. What was retained in 1957 by the National Cancer Institute affecting an integrated federal cancer control effort were the Field Investigations & Demonstrations Branch (renamed the Diagnostic Research Branch in 1960) and the components of what would soon be aggregated as Field Studies: epidemiology, biometry, and environmental carcinogenesis.

Two men were in charge: Dr. John R. Heller, NCI Director, who was prodded into releasing segments of cancer control; and Dr. Al Chapman, Chief of the Division of Special Health Services. They needed a steward.

To direct the new Cancer Control Program, Heller recruited Dr. Lewis Robbins. He was unlike Ray Kaiser in appearance, temperament, and training. Where Kaiser was breezy and quite confident around clinicians of stature, Robbins was more reserved and soft-spoken, fervent in his convictions but also a careful listener. He was one of the few Cancer Control officers actually trained and experienced in the Public Health Service philosophy of cancer control. He'd held a number of local and county health department positions since joining the Service in 1941; in 1946, Dr. Scheele gave him the opportunity to learn about cancer control first-hand in a year's study that took him to two State health department programs: Roswell Park Memorial Institute in New York and Dr. Herbert Lombard's program in Massachusetts. He had been assigned in 1947 to Chicago as Regional Cancer Control Officer, with the presumed task of promoting cytology in the Midwest. It was not a productive exercise. As chronic disease control efforts proliferated, Robbins diversified; he promoted heart disease control in

the region for a time.

But when called to Washington by Heller to lead a new program, the budgetary resources and mission of which were obscure, he was challenged.

> "I can't tell you how frightening it was to be responsible for the entire country for Cancer Control, especially with all of the antagonism and hostility I would encounter at the National Cancer Institute. I had to spend almost a year at the Institute with all that hostility and seeing me take something away from them that they wanted so desperately." (1)

Ray Kaiser and his staff resented the dismemberment of what originally had been Cancer Control. Heller said he "couldn't quarrel with the philosophy [or administrative and jurisdictional change], but I did quarrel with the probable results, and subsequent events proved that I was right." (2) He continued:

> There was resentment on the part of the Cancer Institute people, by and large. They resented the umbilical cord being severed and this tender little baby being placed down there [downtown in the Bureau of State Services] where they felt that it didn't hear the heartbeat of cancer, generally. There was a feeling that it would wither on the vine, which eventually it really did. (3)

Heller's view was that by being separated from the cancer-focused base at the NCI, competition with a whole galaxy of communicable and chronic disease control programs would dilute the effectiveness of cancer control.

Although these are the partisan views of Robbins and Heller, with whom Kaiser possibly agreed, other Institute staff were probably indifferent to the decision. By 1957, the original program was no longer cohesive. Dr. Shannon wanted "extraneous" activities out of the National Cancer Institute, but he was not about to give up funds to establish the program elements elsewhere. The initial administrative decision, with which the National Advisory Cancer Council concurred, was to move only

the $2.25 million state subvention budget to the Bureau of State Services. The additional remnant--the working monies Robbins was given--included a budget of $60,000 in 1957-58. That would cover his salary, a secretary, and some travel--leaving $30,000 for program development!

Without resources--or really a free hand--it was difficult to establish defined program objectives and to proceed with them. In formulating a program and recruiting staff to implement it, Robbins internalized some of the advice given to him in those first few days of orientation:

> . Develop elementary programs first, those that have public health importance (4)
>
> . In cancer programs, we have to go to the State Health Officers; we can't wait for [th]em to come to us (5)
>
> . Concentrate on diagnosis which is central to the cancer control program; get to know the people at the American Cancer Society; get to know how the heart disease control program works and try to learn from their mistakes; maintain your Institute contacts (6)

As Robbins began to focus on what might be done in cancer control, more than once he recalled Rod Heller's initial inducement: "Here is a real opportunity to affect the lives of people. It is one of the great challenges of the Public Health Service." (7) For Robbins, that was an incentive. He took the post, in his words, "for the good of the Service," but, "by God, I was determined to make something worthwhile out of it." (8)

That meaningful programs did evolve, especially from 1959 forward, was due, in considerable part, to Robbins' personal efforts. He listened well. He began to evolve a working philosophy that could peacefully coexist with the National Cancer Institute's burgeoning research establishment. He recruited staff carefully and mobilized them into a working team. And, throughout, eschewing personal aggrandizement, he cultivated

those forces most likely to permit cancer control--early detection especially--to be conducted concurrently by public health agencies and private medical practitioners in their offices. Although steeped in public health practice, he acknowledged the power of organized medicine to pre-empt both diagnostic and treatment services for cancer. Many of the most effective programs developed under his stewardship aimed at improving the skills of the primary physician. Was this accommodation? Acquiescence? Robbins recognized that, in the American scheme, cancer was, after all, managed traditionally by the private medical sector, not the public health sector. By 1957, there were some technological advances facilitating early detection of cancer, and, there were some trained clinicians and control managers.

Budget

The first two years of Robbins' tenure were administratively bizarre and must have been personally frustrating. The transfer of the state subvention budget--about $2.25 million in 1957--was a concession by the Bureau of State Services (BSS) to the National Cancer Institute. No provisions for other discrete cancer control program funds had been contemplated in the 1957-58 or 1958-59 Bureau of State Service budgets. Hence, there was no flexibility or program potential. Robbins found himself faced with a curious problem: To gain the maximum fiscal support, Program funds would have to be derived from the NCI budget, not the Bureau of State Services. The mechanics of transferring the Cancer Control Program had been worked out between Chapman, representing the Bureau of State Health Services, and NCI's Heller by November 19, 1957, Robbins reported in his daily logs. But John Cutler, one of Heller's deputies, "had pushed

the baby back into the womb." (9) On that date, it was agreed that although the Cancer Control Program would be based in the Bureau of State Services, NCI Director Heller would defend the Program's budget in pending appropriations hearings. An operational budget of $84,567 was proposed for fiscal 1958-59, enough to organize a core staff of seven professional persons. Dr. Chapman also located $18,000 of previously unexpended BSS funds and recommended to Robbins that he use it to stage regional conferences--thereby reaching public health and private physicians nationwide--not to initiate a cytology training center for which funding could not be assured in the following years. The Cancer Control Program's so-called budget "ceiling" became a football. On March 11, 1958, in a discussion of the 1960-61 fiscal year budget, Robbins was advised that "no one wants to hurt the program," but it was competing--within the National Institutes of Health--with staffing for the Institute's new Clinical Center. NCI's budget staff recommended that the Program be shifted to the Bureau of State Services; if it remained in NIH, the Program budget would be consistently cut back. (10)

On the next day, Dr. Chapman wrote to Dr. Arnold Kurlander, in the Office of the Surgeon General, requesting that the Surgeon General establish a base for cancer outside of both the Bureau of State Services and the National Institutes of Health. For fiscal year 1960-61, Chapman approved a budget presentation of $500,000 to operate the Washington Program office, $1.5 million to mount a Special Projects Grants Program beyond the current $76,000 operational budget, and $2.25 million being dispensed to the states.

In June, 1958, more than a year after Robbins' recruitment as Special Assistant for Cancer Control Programs, Bureau of State Services,

he was finally given a suite of offices. He installed himself, his modest staff, and the files--many of them grudgingly given to him by the Field Investigations and Demonstrations Branch staff. The federal Cancer Control Program now functioned in room 3913 of the General Services Building in downtown Washington.

The whole mind-set about "downtown" led several staff members long identified with the original Cancer Control Branch and successor Field Investigations and Demonstrations Branch to remain aloof. Nurse Rosalie Peterson was particularly hostile to Robbins but loyal to Ray Kaiser. On the third day of Robbins' "baptism" at NCI, she assailed him:

> Let's get this straight, Dr. Robbins. I won't tell you anything about the [nursing] program if you're going to take the program downtown. I've told them that I won't give anything up. This function just can't be divided. (11)

By early 1962, Miss Peterson would learn, Nursing would be divided, and nearly all of it transferred downtown where Robbins was establishing a program.

On June 19, 1958, Dr. Chapman advised Robbins and others that the state-federal grant formula might be changed from a 1-2 ratio ($1 state for each $2 federal) maintained since 1947 to a 1-1 ratio. "We can lead our states to spend more money, but we can't force them," one staffer commented. (12) Chapman concurred that states would be given three years' notice of the impending fiscal change for subvention.

A month later, Dr. Shannon notified Chapman that all cervical screening programs then operated by the NCI's Field Investigations and Demonstration Branch would be moved to the Bureau of State Services and terminated on July 1, 1960. The Washington, D.C., Cytology Unit, largest and closest of the projects, had to be transferred by January 1, 1959. Chapman supported this recommendation, for here was a way to begin to build up cancer control

resources.

Robbins and his associate, Dr. Sam Kirkwood, devised a plan to convert the Washington Cytology Unit into a service program, first by training cytotechnicians and second, by having the Unit process cytological specimens from the "beneficiaries" of the Army, Navy, Air Force and Public Health Service. (These were dependents of military men, Merchant Marines, and women in federal institutions served by the PHS.) A scanning microscope would be used, with an annual goal of 75,000 slides to be reviewed. They also proposed a study among these beneficiaries to determine what motivated these women to have Papanicolaou smears. Finally, they recommended that the Unit could develop and apply aptitude tests for cytotechnician recruits, a volunteer program to enable cytology centers to evaluate their technicians periodically. (13)

On August 14, 1958, Robbins was advised by NCI's Bob Learmouth, that transfer of the cytology projects was contingent on their service potential. But the operating funds would not be transferred out of the FI & D Branch. Dr. Kaiser wanted instead to extend case-finding for lung and rectal cancer,using the Washington cytology Unit's capabilities. (14)

Another program strategy was to develop a Special Project Grant program within the Cancer Control Program. How else could imaginative, locally indigenous cancer control efforts be stimulated? Again, Robbins was advised that Dr. Shannon could not divert any funds to the Bureau of State Services for this purpose. Rather, the funds might be established at the National Cancer Institute, with the Cancer Control Program acting as a "Study section," helping to develop projects, insuring a built-in research component. All such projects would ultimately have to be approved by the National Advisory Cancer Council (NACC).

This was not a totally unworkable notion --although it was cumbersome in the extreme.

Heller, knowing the attitude of the National Advisory Cancer Council, feared they would not approve special project proposals--and a great deal of effort would be expended for nothing. (15) At the next Cancer Control Program staff meeting, on August 25, 1958, he affirmed his belief that the NACC would not approve the use of NCI funds for "service" programs. About $1.5 million of the diagnostic research funds might be "arrested" from the Field Investigations and Demonstrations Branch, but the consensus was that such a maneuver would require the approval of Senator Lister Hill, Congressman John Fogarty, and the Bureau of the Budget. With respect to Robbins' service plan for the Washington Cytology Unit, Heller still sensed the resistance of some pathologists, even if congressional approval was secured. (16)

The issues broke this way: The intent of the National Cancer Institute, under Dr. Shannon's directive, was to rid the Institute of superfluous, non-research activities but not the funds for these activities. To the degree control by the Institute, through the National Advisory Cancer Council, could be maintained, the Cancer Control Program in the Bureau of State Services would be miniscule, impotent, and unnoticed. Aiding in this manipulative scheme was the fact that budgets were drawn up 18-24 months in advance. The lag-time Robbins experienced in beginning essentially from scratch enabled the NCI to continue its own interpretations of "field studies and demonstrations," and inhibited any measurable alternative cancer control developments.

Orientation

During much of this time Robbins was being "oriented" by every program director of the National Cancer Institute. His daily logs were crammed with conflicting views as to what was ready for application to the populace: Whether the evidence concerning cigarette smoking and lung cancer warranted action; Whether the nation could mount a cervical cytology screening program. Robbins accompanied Dr. Heller to the American Cancer Society annual meeting in October, 1957, when the "Uterine Cancer Year" was launched as an annual theme. He spent nearly a month visiting programs and cancer research institutes around the nation. And, while on that journey, Robbins revisited a number of American cities where he served as a local health officer. There, he picked the brains of practicing physicians he had known before, assessing whether they were ready to perform Papanicolaou smears in their offices and become conduits for cancer control measures.

Robbins found considerable variation of opinion about the Papanicolaou smear. In Indianapolis, one physician said he did smears but asked the patient to take the smear to the laboratory. Only about 10 percent of Indianapolis physicians in 1957 were thought to be doing Papanicolaou smears regularly. One stimulus, Robbins learned, was a two-week promotion during April Cancer Month, when women were urged to have the test for $3, with the American Cancer Society paying the pathologist for reading it. Robbins' own cousin, Dan Barrett, a public health man who went into general practice in 1951, had a different interpretation:

> I don't do Pap smears...I know I should. I'm lazy... I'd do a Pap smear if it had promotion. If I see an eroded cervix, I send 'em to a gynecologist....No, I wouldn't resist establishment of public labs to read Pap smears...but other doctors would. If physicians themselves ask for a public lab, they don't fight as if for their [sic] life....I'd rather treat something I can get some results with.

But Barrett agreed to recommend to the next 100 women patients over age 30 that they have a Papanicolaou smear--and to let Robbins know the outcome. (17)

In San Antonio, Texas, a prominent general surgeon reported he had stopped doing cervical smears because he found the test to be unreliable. The cervical smear is a sorry substitute for a pelvic examination, he told Robbins. He took a biopsy on about every third cervix--he could tell by the feel of the biopsy, in many cases, whether it was cancer or not. (18) After hearing a few more anti-Pap smear practitioners, Robbins found solace in Dr. Dudley Jackson, Sr., whose efforts from 1927-1937 contributed substantially to the establishment of the National Cancer Institute. Jackson admonished him:

> You've gone to the wrong people. You are going to the leaders of organized medicine. They will block everything you should do in cancer....You should talk to cancer patients. Let them tell you what it does to their lives.... You've got to go to the public first....And socialized medicine will come to the doctors, because they don't deserve any better. I'd hate to see socialized medicine, but the people are getting fed up....You're in government, and you'll do just what the medical professional tells you to do. They'll [sic] keep you from doing anything for the public. You shouldn't listen to the medical professional. Go ahead and do you job as you see it. (19)

Robbins defended his position, praising Jackson for his own steadfast volunteer efforts to mount a national cancer program. "But, if I disregard organized medicine," Robbins explained, "I would not be a good civil servant. I would be fired. Someone else would have to

be trained to do my job." (20) Robbins remained in Texas for several days, meeting Jackson's patients and discussing ideas with community physicians and lay persons. Dr. W. W. Irvine, Jr., and his wife, pathologists trained in exfoliative cytology by Dr. John Frost at the University of California-San Francisco, summed up the Texas views of cervical cytology:

> Texas pathologists are against technician screening... let the pathologist do them. Resistance is not the mind of the public, but the physician. We charge $3, although elsewhere in Texas it may be $5 or $10. In California, we charged $10, but that included all repeat examinations. Our physicians need to know the several steps from smear to treatment [a notion which later inspired the 14-Step Cervical Cytology Program].
>
> The whole secret of the Pap smear lies in the man at the scope. He can harm the program by missing too many slides....To justify a technician, we would have to do 20 smears a day....That would require pooling all smears in town, but I don't think we'll approach that soon. We are doing all the doctor's wives. One thing we can tell you: It's going to take a lot of doctor selling. (21)

By October 21, 1957, Robbins had begun to formulate some ideas about what the Cancer Control Program could and could not accomplish with respect to cervical cytology screening. He made the following points:

- Physicians are generally very much concerned about cervical cancer; with more education and promotion, they would extend use of the Pap smear.
- But physicians are not ready--nor would they be for sometime--to do routine cervical smears on all women over 21. They simply do not believe such examinations are practical, especially on a "clean" cervix (one without visually observed problems).
- Education will stimulate increased application of the cervical smear. [Here Robbins outlined a project to enlist 1,000 medical students assigned to state health departments to promote cervical cytology to practicing physicians, after an appropriate orientation.]
- There is a great need for cytotechnicians, immediately. Many pathologists would use them if they were available. The Public Health Service should develop a nucleus for mass teaching of exfoliative cytology to cytotechnicians, using rapid teaching techniques. (22)

Robbins concluded his report with a two-fold recommendation: 1) The only program ready for widespread application was cervical cytology screening. 2) The components should be physician education on how to perform smears and a rapid course to train sizeable numbers of cytotechnicians. Saddling the Cancer Control Program with large-scale demonstration projects, Robbins believed, would thwart progress. (23)

Robbins did not have to worry about that hazard, since the NCI was not about then to abdicate its demonstration projects. On that same day, Robbins was given an office in Ray Kaiser's Branch. Kaiser told Robbins "the new Cancer Control Program doesn't make sense." He offered Robbins a section within the FI & D Branch of NCI. Robbins declined, saying:

> NCI officers are like part-time health officers.... Because of medical professional support, they couldn't enter public health without having the immediate approval or disapproval of the Council [NACC] and Committee [Cancer Control Committee]. And those bodies were always oriented toward the views of the medical practitioner. (24)

These first five months were a critical period. Robbins was beginning to see both the potential and the obstacles. He was beginning to formulate a philosophy to strengthen the national Cancer Control Program by fusing public health principles and private medical practices. This led to selection of an Advisory Committee which combined the best of both those worlds.

Advisory Committee

Formation of an Advisory Committee with clout was one of Robbin's major achievements in his first two years as Chief of the Cancer Control Program. His orientation around the country had been comprehensive. Within 18 months,

he had organized and conducted a series of regional conferences, bringing together cancer control sympathizers and enthusiasts from public and private medicine. At the first of these regional conferences, he was attracted to the resoluteness of several California physicians. They were the corps of the California Cancer Commission, the principal spokesmen of cancer control in the California Medical Association and the California Division of the American Cancer Society. They were nationally respected, proficient clinicians, shrewd medical politicians, and staunchly conservative about limiting government "meddling" in medical practice. Robbins waged a successful campaign to appoint two of these men, surgeon John Cline and pathologist David Wood, to his Cancer Control Program Advisory Committee. He shepherded them through administrative clearances. With additional guidance from mentors Heller and Chapman, a committee was assembled which brought together practicing physicians and public health figures, as had been the case in the original Cancer Control Program Advisory Committee established in 1948.

Advisory Committee
to the
Cancer Control Program
Bureau of State Services
1959-1963

David A. Wood, M.D.; Chairman	University pathologist; Director, Cancer Research Institute; University of California, San Francisco
Ulrich R. Bryner, M.D.	General practitioner; past President American Academy of General Practice
John W. Cline, M.D.	Surgeon
Warren Cole, M.D.	University surgeon; Head, Department of Surgery, University of Illinois

Advisory Committee--Continued

Joseph A. Cunningham, M.D.	University pathologist; University of Alabama
James J. Nickson, M.D.	University radiologist; Cornell University Medical School
John W. Spellman, M.D.	Surgeon
Samuel G. Taylor, III, M.D.	Internal medicine
Bernard Bucove, M.D.	State Health Officer, Washington State
Harold S. Diehl, M.D.	Senior Vice-President for Research and Medical Affairs, Cancer Society; retired dean, University of Minnesota School of Public Health
Lloyd M. Graves, M.D.	Health Officer, Memphis-Shelby County
John Paul Lindsay, M.D.	Coordinator, Strang Clinic; American Academy of General Practice Board
Mack I. Shanholtz, M.D.	Virginia State Health Commissioner; former President, Assoc. of State & Territorial Health Officers
Charles E. Smith, M.D.	Dean, University of California Berkeley School of Public Health

Wood was Robbins' choice for chairman. Robbins enlisted Heller to help him entice Wood, who was just completing a term as President of the American Cancer Society and who had been a powerhouse in the College of American Pathologists. (President 1952-55)

> I knew he would give us leadership like nobody else would.... He was communicative.... So we created a climate through that Advisory Committee...that allowed us to work with people. (25)

Wood proved to be a strong, sometimes dogmatic leader, but methodical

and rational. He and Robbins had trust between them. The staff was Robbins' responsibility; the Committee, Wood's. Robbins went over the agenda with Wood carefully in advance of each meeting; in that briefing, they could practically predict which way policies and actions might flow. Meeting frequently at first, quarterly thereafter, it proved to be a committee of advocacy and mettle.

The Advisory Committee was originally constituted as a typical NIH advisory group to guide the Program in its intramural but principally extramural grant pursuits. It was created when the Special Project Grant mechanism had been approved and funds set aside by NCI for implementation. At first, Committee decisions were referred to the National Advisory Cancer Council. The Committee met for the first time on November 9, 1959. Its initial major function was to review applications for Community Cancer Demonstration Projects Grants, for which funds had been budgeted and notices issued.

At the October 7, 1960, meeting, Dr. Wood raised an unexpected problem: the National Advisory Cancer Council had reversed some of the decisions on projects acted upon previously by the Advisory Committee. It was Wood's understanding that there was no legal compulsion to have the National Advisory Cancer Council review, with veto power, all actions of the Advisory Committee. Dr. John Cline concurred and proposed this momentous resolution:

> Whereas, the functions of the Advisory Committee to the Cancer Control Program are to deal with the practical aspects of cancer control as related to people and the problems in the field, and
>
> Whereas, the Committee has been specifically instructed to interest itself in the spheres of lay and professional education, prevention,

diagnosis, therapy, rehabilitation and epidemiology in the field of cancer, and

Whereas, the Cancer Control Program in the Bureau of State Services is not related to research except as directly applied to the program, and

Whereas, the membership of the Committee was carefully selected for its practical knowledge in the field of cancer control and is composed of clinicians, public health officers and other physicians whose experience uniquely qualifies them to advise the Surgeon General relative to cancer control, [emphasis added]

therefore be it

RESOLVED: That the Committee respectfully request the Surgeon General to direct that the actions of the Committee on applications for grants be not subject to review for the purpose of veto or reversal by any intervening advisory body but be transmitted to all proper persons and bodies for their information. In the event that such persons or bodies hold contrary opinion, these opinions and the reasons therefor be set forth in detail and referred back to the Committee for its further consideration. (26)

It was a stunning resolution, drafted by physicians who were not about to have their presumed superior knowledge of cancer control overseen by a Council on which sat lay persons as well as others sympathetic to research.

In an executive session that same day with NCI Director Dr. Kenneth Endicott and Dr. Michael Shimkin, "an investigator who always thought cancer control," Endicott conceded that increased Insitute appropriations already taxed the Council's ability to make careful judgments; the Council had more work than their span of attention could handle. He thought the Cancer Control

Advisory Committee should be the final body on project review and approval. Dr. Shimkin thought the Council would not be happy about this action and believed that before there was a serious difference among those individuals, they should simmer down and look at this in a calmer fashion. (27)

On November 4, Wood, Robbins, and NCI's Deputy Director, Ralph Meader, consulted Surgeon General Leroy Burney. A draft statement was readied for the National Advisory Cancer Council's meeting on November 15th and was presented by Wood. Meader announced that the Institute was abolishing the Cancer Control Committee (last chaired by Dr. Murray Copeland) and possibly the Public Health Review Board. Finally, duplicative advisory functions were being stripped away.

Robbins' understated log entry for November 15th hardly conveys the significance or flavor of the confrontation between Wood and the Council. It reads:

> Dr. Wood presents to the Council the matter of the mechanics of review of Community Cancer Demonstration Project Grants. The Council votes to ask the Advisory Committee to give final review, only reporting once a year to the Council. (28)

It was a tremendous victory. Now the cord from the Institute was severed. The federal Cancer Control Program was to be directed into activities acceptable to the only constituency around: the Cancer Control Program Advisory Committee.

Up to that point, the tug of war with the Institute over control, let alone development of substantive demonstrations, had been played out in various ways. Genuine program planning was hampered by limited resources and even more limited authority. The internecine warfare within the Institute, whose budget was expanding rapidly--and between the Institute and other components of the Public Health Service within which it reposed--was generally destructive. Heller, while able in recruiting and defending a budget, grew weary. He re-

tired from the PHS in 1960, remaining on the cancer scene, to be replaced by pathologist-administrator Dr. Kenneth Endicott.

Cigarette Smoking-Lung Cancer

One of the more ludicrous examples of overlapping authority--or lack of authority--was the 1959 report of the Surgeon General, Dr. Leroy Burney, on the correlation between cigarette smoking and lung cancer.

As early as July 30, 1957, in orienting Robbins, Dr. Michael Shimkin told him there was enough data on cigarette smoking to indict it as a primary etiological factor in cancer of the lung. He recommended that a pilot education program be developed. Robbins and his very limited staff decided to write a brochure for physicians, which, for some months at least, was sanctioned by Robbins' complex retinue of overseers. The brochure went through numerous reviews at the National Cancer Institute throughout the next 16 months.

On January 9, 1959, NCI Director Heller said to press forward with the brochure: He wanted to have it in the hands of American physicians by the time of the next NCI budgetary hearings before Congress. He also advised Robbins not to mount a hard-sell promotion program against smoking to the public. Just present the facts and truth in as dignified manner as possible--and let other groups, such as the American Cancer Society, do the promotion. (29)

The brochure was revised. On January 26th, a man named Jack Fletcher called Robbins' information officer, James Kieley: "I reacted to this brochure with the sixth sense necessary for survival, and my reaction was that the brochure has trouble written all over it." (30) Robbins advised Kieley that the Surgeon General had given the green light for the Public Health

Service to publish the brochure.

At this point, NIH Director Shannon got into the act. The brochure was too simple he said, and should not be sent to American physicians by direct mail. Robbins explained that the intent was to work with Regional Special Health Service staff to "detail" the brochure to the states. (31)

On February 13, Drs. Wilhelm Hueper, Murray Shear and Harold Stewart of NCI's Carcinogensis Branch, disagreed with any emphasis that cigarette smoking induced lung cancer. They were against publication of such a brochure. Dr. John Cutler of the Bureau of State Services, on the same day, approved it. (32)

On March 5, 1959, in planning a physician attitude study to accompany the brochure, it was still mired in clearances. (33)

In the next few weeks, someone decided the publication should not be a brochure. Dr. Michael Shimkin recommended that it be made into a scientific paper which should be endorsed by the American Medical Association. On May 18, Drs. John Porterfield and David Price concurred on the text of what was now a scientific paper--except for the conclusion. They believed that the way it was now written implied that the Public Health Service was going to begin a national program directed at the public. (34) On May 20, a staff person reported that some tobacco stocks were down because of a rumor that the Public Health Service was going to publish a paper on cancer of the lung and smoking. (35) On May 22, Robbins concluded, "the history of this paper, Lung Cancer and Smoking, started out as a simple brochure with illustrations--and then became a review of the entire literature of smoking and lung cancer." (36)

The paper was shipped around--actually hand-carried, Robbins recalled--for months. At a special meeting dealing with PHS program information problems,

Robbins said in disgust:

> If the information committee is interested in looking for things which hold up information to the public and the profession, they need go no further. The paper on Smoking and Lung Cancer was requested by the Surgeon General on June 6, 1958. A final draft was prepared in September, 1958. The present draft, about 38th in major revisions, is now in the Secretary's [HEW] Office.... Our inability to get the paper...to the profession constitutes a gag on our scientific communications. (37) [emphasis added]

John Cutler was sympathetic and said he would do all he could to get the paper to the Journal of the American Medical Association expeditiously. (38)

A few days later, Robbins wrote in his log, "It does not take as much courage to write a paper on lung cancer and smoking as to give it--and take the pressures that result." (39)

On October 5, Surgeon General Burney asked his superior, HEW Secretary Arthur Flemming, what had become of "my paper on smoking and lung cancer." Flemming replied that he was planning to take it to the White House. (40)

In the ensuing month, the desired clearances and modifications were secured. Robbins was busy with other tasks. On November 5, Dr. Heller was apprised that the paperwas to be published in the November 28th edition of the Journal of the American Medical Association. He and Robbins discussed funds to purchase sufficient reprints for an exhibit at the AMA winter meeting 10 days later. Accompanying editorials were proposed: one conservative in accepting the smoking-cancer link, the other less so. (41) The Surgeon General selected the more conservative editorial (although it is difficult to believe he actually approved the language which ultimately appeared), claiming that "sufficient evidence does not warrant the assumption of an all-or-none authoritative position." (42)

The article, "Smoking and Lung Cancer: A Statement of the Public Health Service," authored by Leroy Burney, appeared in the November 28th Journal of the American Medical Association. A scholarly review of the knowledge incriminating cigarette smoking as carcinogenic was presented, with epidemiological data from 1928 forward. Both the confirmatory prospective studies of Doll and Hill, Hammond and Horn, the Harold Dorn study of life insurance holders, and the critiques of Berkson, C. C. Little, Fisher, and Brooke are fully stated. The article refers to earliest governmental action, beginning in 1956, when a joint American Cancer Society-American Heart Association-National Cancer Institute Study Group on Smoking and Health conferred in six two-day conferences. That group concluded: "The sum total of scientific evidence establishes beyond a reasonable doubt that cigarette smoking is a causative factor in the rapidly increasing incidence of human epidermoid carcinoma of the lung." (43)

Burney's article, drafted by Robbins and massaged by perhaps 100 others, reviewed the various preventive prospects: the potential of filters, treatment of tobacco to remove its carcinogenic properties, air filtration--none of which was believed technologically possible. The article enunciates seven conclusions, summarized by: "The weight of evidence...implicates smoking as the principal etiological factor in the increasing incidence of lung cancer." (44)

Burney told Robbins, "That article on smoking and lung cancer had received more scrutiny than any other paper since the Bible." (45)

But Burney's statement had little impact. A nearly simultaneous announcement about a flu epidemic generated more media interest, Burney recalled 17 years later in a conversation with Dr. Lester Breslow.

Burney attributed the inattention to several factors. First there was not sufficient agreement among Public Health Service scientists about the adverse effects of cigarette smoking. (Dr. Harold Stewart, a prominent NCI pathologist, opposed issuance of the statement; Burney principally relied on Dr. Michael Shimkin's assessment of the evidence.) Second, the American Cancer Society, although having advised physicians about cigarettes' potential health hazard, was not yet ready to assume a supportive active role. Third, Burney attributes some of the inaction to his own lack of aggressiveness. He had decided to merely advise the medical profession, and state and local health and education departments, rather than take personal, strong, national leadership. Then too, while HEW Secretary Flemming approved the statement, he was not genuinely involved in its development or issuance. The Public Health Service carried the issue along and did not rely on the prestige of an outside national advisory body, as Surgeon General Luther Terry did in 1964. (See Book One, Chapter 3). And the Service was distracted from enduring pursuit of the issue, deeply embroiled instead in problems generated by the Salk-Sabin poliomyelitis vaccine and the outbreak of the "Hong Kong" flu. (46)

The minimal impact of the statement, so long in development, was consistent with the general malaise then overshadowing the federal Cancer Control Program.

(1) Interview with Dr. Lewis Robbins, former Chief, Cancer Control Program, Bureau of State Services, 1957-1965, by Lester and Devra Breslow of HCCP, November 20, 1975, Indianapolis, Ind.

(2) Interview with Dr. John R. Heller, former Director, National Cancer Institute, by Devra Breslow of HCCP, November 4, 1975, Bethesda, Md.

(3) See note (2).

(4) Log of Dr. Lewis Robbins, May 20, 1957.

(5) Log of Dr. Lewis Robbins, May 21, 1957, quoting Dr. Noka Hon.

(6) Log of Dr. Lewis Robbins, May 23, 1957, quoting Dr. J.R. Heller.

(7) Log of Dr. Lewis Robbins, May 23, 1957.

(8) See note (1).

(9) Log of Dr. Lewis Robbins, November 19, 1957.

(10) Log of Dr. Lewis Robbins, March 11, 1958.

(11) Log of Dr. Lewis Robbins, May 29, 1957.

(12) Log of Dr. Lewis Robbins, June 19, 1958.

(13) Log of Dr. Lewis Robbins, August 12, 1958.

(14) Log of Dr. Lewis Robbins, August 14, 1958.

(15) Log of Dr. Lewis Robbins, August 22, 1958.

(16) Log of Dr. Lewis Robbins, August 25, 1958.

(17) Log of Dr. Lewis Robbins, September 29, 1957.

(18) Log of Dr. Lewis Robbins, October 1, 1957.

(19) Log of Dr. Lewis Robbins, October 2, 1957.

(20) See note (19).

(21) Log of Dr. Lewis Robbins, October 8, 1957.

(22) Log of Dr. Lewis Robbins, October 21, 1957.

(23) See note (22).

(24) See note (22).

(25) See note (1).

(26) Log of Dr. Lewis Robbins, October 7, 1960.

(27) See note (26).

(28) Log of Dr. Lewis Robbins, November 15, 1960.

(29) Log of Dr. Lewis Robbins, January 9, 1959.

(30) Log of Dr. Lewis Robbins, January 26, 1959.

(31) Log of Dr. Lewis Robbins, February 9, 1959.

(32) Log of Dr. Lewis Robbins, February 13, 1959.

(33) Log of Dr. Lewis Robbins, March 5, 1959.

(34) Log of Dr. Lewis Robbins, May 18, 1959.

(35) Log of Dr. Lewis Robbins, May 20, 1959.

(36) Log of Dr. Lewis Robbins, May 22, 1959.

(37) Log of Dr. Lewis Robbins, September 24, 1959.

(38) See note (37).

(39) Log of Dr. Lewis Robbins, September 28, 1959.

(40) Log of Dr. Lewis Robbins, October 5, 1959.

(41) Log of Dr. Lewis Robbins, November 5, 1959.

(42) Editorial. J.A.M.A. 171:2104, December 12, 1959.

(43) Joint report of Study Group on Smoking and Health. Science 125: 1129-1133, June 7, 1957.

(44) Burney, L.: Smoking and lung cancer: a statement of the Public Health Service. J.A.M.A. 171:1829-1837, November 28, 1959, at 37.

(45) See note (1).

(46) Interview with Dr. Leroy Burney, President, Millbank Memorial Fund, and former U.S. Public Health Service Surgeon General, by Lester Breslow of HCCP, May 18, 1976, New York City.

CHAPTER 6

CANCER CONTROL REVIVED 1960-1965

The potential for rebuilding a cohesive cancer control program outside of the National Cancer Institute was facilitated by the "changing of the guard" at the NCI. Dr. Kenneth Endicott, who became NCI Director in 1960, recalled:

> When I succeeded Rod Heller, one of my first official acts was to abolish Ray Kaiser's Branch [Field Investigations & Demonstrations Branch]. I did so...to get the activities back into the mainstream where more rigorous scientific standards could be assured and where activities could feed out of the more generally financed 'pots' of research and research training. (1)

Gradually, some segments of the former Field Investigations and Demonstrations Branch were rearranged administratively within the National Cancer Institute; others were moved to the revitalized Cancer Control Program in the Bureau of State Services. Several were consolidated to become NCI Field Studies; Nursing, Clinical Traineeships, and Radium Loan programs were eventually moved to the Cancer Control Program in the Bureau of State Services.

Of Field Studies, which soon encompassed Epidemiology, Biometry, Environmental Carcinogenesis and Diagnostic Research Branches, former Director Dr. Michael Shimkin recalled how priorities were set:

> That depended on how much motion and how much authority we were given. The time I was...there, fortunately, we had a lot less 'watchers at the door.' We didn't have to have all our [advisory] committees represented by sex, by race, by geographic persuasion, and by politics. We pre-

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Principal Researcher/Writer: Devra M. Breslow

> sumably selected from among our friends, people who presumably knew some [thing] about the subject. And we usually had a good agenda already prepared for them [advisory committees]. That good agenda, of course, means what we were interested in....The more we could sell, the more enthusiastic they got, the higher the priority rose. (2) (Emphasis added.)

In 1961, state subvention formula grants reached a new high: $3.75 million. A minimum of $25,000 was made available to each state. The definition of the Community Demonstration Project Grant Program stated in NCI's official periodic statement, Research and Related Programs of the National Cancer Institute, 1961 edition, elucidates the delicate balance between the prerogatives of public health and organized medicine:

> The Community Demonstration Project Grant Program is designed to stimulate the wider use of new and confirmed practices, as defined by local conditions and needs. By aiding projects that strengthen community health agencies in the application of tested methods for preventing or controlling cancer, the 'payoff' on validated control techniques is hastened....Recognizing that diverse talents and specialties are requisite to the success of community control efforts, the Cancer Control Program and its Advisory Committee have encouraged sponsors of demonstration projects to involve all the interested medical and allied groups in their communities. (3)

With that philosophy ever-present, the federal Cancer Control Program took on momentum, budget, program and direction. By 1962, Dr. Lewis Robbins had gathered a quality staff--in his words, "it was like Camelot" (4)--and a staunchly supportive partisan Cancer Control Advisory Committee. Several principles stood out, according to Robbins:

- Cancer control is demonstration--not exhortation.
- Early detection, if systematically applied, could reduce cancer morbidity and mortality.

- The prime targets are the major cancer killers: lung, cervix, breast, colon-rectum.
- Activities to enhance the motivation and skills of the private medical practitioner are essential.
- Individual states can be guided but not told how to spend federal formula monies.
- Cancer control, to be effective, must operate at the local level. (5)

The program as it evolved can best be reviewed according to the cancer sites it proposed to attack.

Cervical Cancer

In 1958, as the American Cancer Society entered its proclaimed "Uterine Cancer Year," the Washington Cytology Unit was transferred from the Field Investigations and Demonstrations Branch of the NCI to the Cancer Control Program. Instead of performing a nominal number of Pap smears on self-referred and physician-referred private patients and on members of the International Ladies' Garment Workers Union, the Unit was converted into a service program. Cervical cytology services were provided to federal beneficiaries, military dependents, American Indians, Public Health Service Hospital patients, and those incarcerated by the United States Bureau of Prisons. Cytotechnician training and evaluation services were important corollaries. Training of deaf individuals was deemed feasible, leading to a grant with George Washington University to train students at Gallaudet School for the Deaf. (6)

Since low-income women were known to be at highest risk of cervical cancer, a statewide project begun in Florida in 1959 proved to be a demon-

stration of what could be accomplished when attention was paid to personal motivation and public and private medical sectors were jointly engaged. The goal was to determine what proportion of women receiving Aid to Dependent Children (ADC) benefits could be persuaded to have a Pap smear. They were at high risk of cervical cancer; their educational level was generally low. The state health department, medical society, and local division of the American Cancer Society united in sponsoring this demonstration. The program moved systematically from county to county, gathering advocates with fresh knowledge of how to mobilize the appropriate resources.

According to Dr. Robbins, "We estimated as many as 2% already had carcinoma in situ....In Dade County, in the first year, we got 10% of the ADC women to participate--550 Pap smears. In the second year, 40% participation." Robbins notes the attention given to diplomatic detail.

> Then we began to use motivational strategies. We sent a team--a health educator and a nurse--to assist the Florida staff. (7) We recommended they bring together small groups, offer them tea and sandwiches, then give them a low-key presentation about cancer of the cervix. Everyone...is feeling pretty good. One asks another, 'Why don't you have one, Ziggy?' 'Well, I was afraid that if I had my uterus out, I couldn't have my man.' Somebody else said, 'I had my uterus out and I'm having my man.' We found that every time someone would raise an objection [to having the Pap smear and the possible sequelae if it was found to be positive], there would be an answer [voiced by someone] in that group. (8)

With tea and frankness, the Florida ADC Project took hold. In some counties, a reported 98 percent of eligible ADC recipients had that first Pap smear. (9)

The Cancer Control Program tried, unsuccessfully, to promote the program in other states.

The idea for systematic nationwide expansion of cervical cancer detection came about through an innocent exchange between Advisory Committee Chairman Wood and Robbins in late 1961. Wood referred to "burdens" in the propagation of cervical cytology--"burdens" to the primary physician, to the pathologist, and to the woman. Robbins turned this idea of "burdens" into something positive. He outlined a sequence of methodical procedures to overcome the burdens and to insure that quality was built into disseminating this cancer control technique. (10) He and his staff devised a 14-step program to demonstrate the places where cervical cancer cases might be missed. These 14 steps--criteria--would enable local medical institutions or public health agencies to demonstrate high quality, systematic control of uterine cancer within the context of regularly delivered private or public medical services. Once refined and approved, a call for project applicants was issued.

The 14 steps were:

- State objective of program through a written guide
- Orient participating professionals to insure they can effectively participate in program
- Identify population group to be served and traditional source of medical care for the group [public or private]
- Gain active participation of women beneficiaries by anticipating their anxiety over a potential positive smear, knowing how much and what to tell them; know precisely what referral and follow-up means are in place
- Collect pertinent demographic data for follow-up
- Determine what type of smear should be taken (endometrial aspiration, vaginal pool aspiration, cervical scraping, Schiller test plus biopsy)
- Quality control of cytologic examination services in place
- Define follow-up procedures, engaging public health nurse or other worker to convey positive reports personally
- Definitive alternative diagnostic procedures in place: conization, four-point biopsy, Schiller test
- High-quality pathologic and histologic diagnostic services in place
- Correlation of histologic and clinical findings, staging
- High-quality treatment services in place

. Follow-up periodic re-examination
. Evaluation means (11)

Successful proponents received from $14,000-$150,000 per year to mobilize a 14-step program of at least three years' duration. By late 1962, 17 such demonstrations had been funded. Among the first recipients were health departments (notably in states where Advisory Committee members resided), several university medical centers, and large voluntary hospitals and medical societies. (12) By 1965, 29 such centers had been established nationwide, primarily to reach women at high risk of cervical cancer. Of 245,000 women examined, 1360 found to have cervical cancer were recommended for further treatment. (13)

A parallel program thrust was to expand cytotechnologist training to handle the obvious increase in demand--by women and physicians alike--for the Pap smear. In his 1963 report to the National Advisory Cancer Council, Dr. Robbins could point to 52 projects funded around the nation in which 300 persons had been trained as cytotechnicians. (14) The Cancer Control Program surveyed progress at that point and recommended a new program format to facilitate handling more students without sacrificing quality and greater emphasis on placement of trainees. To support these manpower efforts, three training films were produced and distributed; a widely accepted teaching manual was developed and distributed without charge to all approved schools; a traveling Program consultant visited approved schools of cytotechnology; and an annual workshop on new techniques was underwritten for cytologists attending the American Society of Cytology. (15) Progress was steady, acceptable to the Advisory Committee, and reflected Chairman Wood's insistence on quality control "implanted" into the training of cytotechnicians--which was the backbone of cervical cytology services. (16)

About $1 million per year in community demonstration (not state subvention) monies was being invested from 1962 forward "in building systematic cytological screening for cancer of the cervix into the regular practice of community and public agency care...." (17) In 1965, $1.6 million was being invested in cervical cytology services and cytotechnician training. (18)

These undertakings, while significant, were having only a marginal impact on cervical cancer detection. Robbins was nettled by a question asked him in 1957 by a Texas general practitioner: "What's a Pap smear?" (19) If, 14 years after the famous Papanicolaou-Traut monograph, American general practitioners did not know about the Pap smear, millions of American women were being denied this single most effective means of cancer control.

It became obvious to Robbins and his staff that cervical cancer detection had to be moved from segregated, specialized settings and integrated into the mainstream of health care. At this point, the objective of reaching the high-risk, hard-to-reach woman gave way to a broader intent: reaching all American women. Building on the confidence established by the Cancer Control Program with the American Academy of General Practice (see Shop-Talk, page 640), the Office-Detected Cervical Cancer Program evolved. Launched in 1965, individual state academies were approached to incorporate the 14-point criteria in their own office practices. Three participated in the pilot study. The Cancer Control Program provided consultation on organization of state committees and critical statistical analysis. Patients found on biopsy to have cervical cancer were scheduled to be followed for five years.

"This was the most important thing we did in all of cancer control," Robbins believed. General practitioners had come to him and said, "You government people are liars. There isn't a problem of family doctors doing Pap smears." According to Robbins, "I asked them what percent of American women they thought had received Pap smears. They thought 40-50 percent. When we were able to show them that a considerably smaller proportion actually had received a single smear by 1963, they said, 'We'll help you.'

"We set a goal of 100,000 smears. After they got their first 100,000, they wanted to go on." (20)

By 1969, when the funding incentives were curtailed, 6,000 physicians had participated; 1.4 million cervical cancer detection examinations had been administered; 2,900 carcinomas had been detected. (21)

Robbins could take a measure of comfort from the strategy. Nothing before had ever really made a rapid, enduring impact on cervical cancer detection, other than procedures performed in private gynecologists' offices or public health clinics. Involving 6,000 American generalists in a technique which became habitual, even after the start-up funds were withdrawn, may indeed have been the "most important thing" accomplished by the Cancer Control Program.

As a final increment, the Program also evaluated whether the self-obtained smear was effective. Robbins himself was skeptical. "Cancer is so serious that when you take it out of the judgment of a clinician, you will make all kinds of mistakes. A physician can take responsibility for mistakes, but laymen can't." (22) What the Program did find, in feasibility demonstrations, was that if women took their own smears, they could scrape a culture from the wrong portion of the cervix and the potential for error was large. (23)

Lung Cancer

Although Robbins was strongly convinced of the cigarette smoking-lung cancer link, he made a studied effort to avoid being embroiled in the central scientific argument. The evidence concerning the impact of cigarette smoking on health was first publicly delineated by the Surgeon General in 1959, but mounting demonstration projects or other control efforts to combat lung cancer were early thwarted by the general climate of hesitation, disbelief, and downright confusion. There were a few false starts. Robbins thought reaching high school children with a demonstration of what cigarette smoke actually did to the bronchial cilia might be a good idea. He asked the Washington Cytology Unit to develop a laboratory, with Program support, to do just this. He knew that bronchial cilia survived 36 hours after removal from a calf and that a splendid visual demonstration of destructive action could be devised. The irascibility of the Unit Director thwarted that effort. (24)

A turning point, Robbins believes, was providing timely financial support not to conduct a large-scale demonstration, but to facilitate a report of a long-term prospective survey of 3,000 veterans to determine if semi-annual chest X-rays could detect lung cancer early enough to be treated effectively. Dr. Katherine Boucot's study revealed little value in periodic chest X-rays as an early detection screening procedure. By contrast, when Drs. Hammond and Horn were seeking $350,000 of annual federal funds to assist the ACS large-scale research study, NCI Director Endicott advised Robbins that the project was not a demonstration, but clearly research, and the Cancer Control Advisory Committee was deemed scientifically unqualified to evaluate it. (25)

Behavioral studies concerning cigarette smoking were supported by the Program as early as 1958, when modest funds were given to Godfrey Hochbaum, Ph.D., to study the attitudes and habits of physicians related to cigarette smoking. (26) The behavioral aspects of cigarette smoking were among the topics discussed at the March, 1962, Conference on Behavioral Sciences in Cancer Control sponsored by the Cancer Control Program. Here, Robbins began his campaign to persuade Daniel Horn, long associated with the American Cancer Society, to join his staff. Horn did so, and the National Clearinghouse on Smoking and Health was eventually established within the Program toward the end of Robbins' tenure. (See Book One, Chapter 3.) The Cancer Control Program launched the San Diego saturation study, in which various behavioral strategies were tested among several age groups, to learn what motivates individuals to begin smoking, to continue, and to cease. (27)

The Cancer Control Program was a catalyst in bringing four voluntary health agencies (the American Cancer Society, American Heart Association, National Tuberculosis Association, and the American Public Health Association) to the Surgeon General in 1962, but the Program's delicate link to the National Cancer Institute probably impeded it from playing a major role in staffing or influencing the formulations of the Surgeon General's Advisory Committee on Smoking and Health. On January 3, 1962, Dr. Endicott was briefed by Robbins on a meeting scheduled for the next day between the Surgeon General and a delegation from the four agencies united to press the Public Health Service to act on the scientific evidence incriminating cigarette smoking. Endicott said he would listen to the delegation, but he claimed he had discharged his responsibility to appoint a federal smoking commission when he introduced the American Cancer

Society's Senior Vice-President for Medical Affairs, Dr. Harold Diehl, to Surgeon General Luther Terry. Further, Endicott said he didn't like the notion of a commission. He believed it was more important to make the cigarette safer by reducing the amount of tars. (28)

A heavy cigarette smoker himself, Endicott said he thought it would be difficult to get people to stop smoking. He also believed it would be unwise to legislate against cigarette smoking. In Robbins' words, "[Endicott] wondered if this was an important public health problem." (29)

Since the Cancer Control Program's budget was still based within the National Cancer Institute, Robbins was on a tightrope. If he antagonized Endicott on this issue, the entire Cancer Control Program might be jeopardized. He had allies in the Bureau of State Services, but the money was still controlled by NCI.

After the delegates made their request, Robbins cited some optimistic data by Lombard and Snegiriff about physicians' experience in reducing their own cigarette smoking. Where his Program might assist was to use its established physician education strategies--and not "go over their heads" directly to the public. (30) Robbins' approach may have saved face with Endicott, but it made no impression on the Commission proponents.

Dr. Howard Taylor, Jr., Chairman of the American Cancer Society's Committee on Tobacco and Cancer, asked Terry if he would be embarrassed if the four agencies sought legislation for such a commission. Terry said no. (31) He appointed his Advisory Committee on Smoking and Health later in 1962. The only link the Cancer Control Program had with the Commission was lending Daniel Horn's expertise regarding behavioral aspects, including his Cancer Control Program study of physicians' attitudes and practices in Philadelphia, which attempted to identify a baseline for educational strategies. (32)

In essence, the Cancer Control Program remained in the wings, waiting for a call to action. Until publication of the Surgeon General's Report in January, 1964, the Cancer Control Program had taken a generally passive role in the smoking and health issue. Robbins claimed the "wait and see" attitude toward what the Committee would ordain "has not blocked categorical activities....The Cancer Control Program is mapping out studies of the behavioral aspects of smoking...both professional and lay viewpoints." (33)

In 1962, the Program also underwrote a study to evaluate the differences, qualitatively and quantitatively, between the sputum of smokers and non-smokers, (34) but no perceptible differences were found. In 1963, the Program awarded a grant to investigate the relationship between exfoliative cell observations and a lung cancer patient's histology and histochemistry. (35) These last two exercises harken back to the struggles of the Field Investigations and Demonstrations Branch to find fresh early detection measures which could have potential mass applications. Since they were unproductive, the Program dropped those lines of investigation. (36)

With professional education uppermost in Robbins' mind, the Program organized a conference in September, 1963, four months prior to publication of the Surgeon General's Report. The conferees, 12 medical journal editors and members of the Advisory Committee's Subcommittee on Smoking and Lung Cancer, discussed how to improve communication to the medical profession of the steadily mounting evidence that incriminated cigarette smoking. (37) It was a relatively inexpensive exercise for a Cancer Control Program which knew action should be taken but struggled to find ideas, encouragement, and authority to do something.

To Robbins' mind, formation of the National Clearinghouse and the San Diego saturation study Horn mobilized after 1964 were as close to action as the Program came, following the 1964 National Conference on Cigarette Smoking and Youth. He personally ascribed importance to formation of the Inter-Agency Council on Smoking and Health,* of which he was the first Acting Chairman, but others would later question the ultimate impact this group achieved.

The approach to lung cancer was more frenetic than the approach to cervical cancer. There were no surefire early detection tools; the equivocation of NCI and even Public Health Service policy makers, many of whom were cigarette smokers, diluted aggressive preventive action; the economic issues, still unresolved today, impeded progress. (See Book One, Chapter 3.) The actions taken, especially the recruitment of Daniel Horn and the penetration of the attitudinal-behavioral aspects of the issue, were worthwhile. The behavioral studies gave insight into smoking practices and disclosed attitudinal manipulations which, in the long run, might pay off in a diminution of smoking itself. Intervention through massive screening programs was not possible. And research into the disease process itself, discerning information about the latent period and physiological differences between smokers and nonsmokers, was felt to be inappropriate for a cancer control program. (38)

Breast Cancer

The situation was somewhat different for control of breast cancer. In the late 1950s there was a surgical hypothesis that if breast cancer could be found when lesions were small, mortality from this major killer

*A group of governmental and voluntary agencies committed to policies to reduce cigarette smoking.

of American women might be reduced. (39)

Robbins was first taken with the ideas of Dr. Ian MacDonald, a Los Angeles surgeon, who espoused the notion of "biologic predeterminism." (40) MacDonald asserted that, with the exception of uterine cervical cancer, which demonstrated "an almost arithmetic spatial progression by duration with a proportionate diminution in therapeutic salvage," (41) few cancers would necessarily be more curable merely because they were discovered and treated "early" in their course.

> The undue emphasis on early treatment ignores the complex biological nature of cancer....Different forms of cancer are entirely disparate in their natural history, and even the same histologic structure may be of variable significance in different hosts (persons). (42)

With respect to breast cancer, MacDonald was especially critical.

> By the time a cancer of the breast is clinically detectable, there is an almost 50% chance that regional nodal metastases are already established. Thus the widespread application of treatment in the earliest possible phase of this disease will not produce more than minor, fractional improvement in end results. (43)

MacDonald, therefore, found little value in mass screening, except for uterine cancer, to affect mortality.

Robbins rejected MacDonald's hypothesis about the negative value of finding breast lesions "early." Yet nothing definitive was emerging from basic research to identify women at high risk of breast cancer, women in whom the process might have begun 20 years or longer before the first clinical evidence--palpation of a lump--was revealed. Given this deficit, almost by default, improved techniques for early detection became a logical direction.

Robbins became familiar with the work of diagnostic radiologists Dr. Jacob Gershon-Cohen and Dr. Robert Egan. (See Book One, Chapter 5.)

As early as February 25, 1958, Robbins heard surgeon I. S. Ravdin, a member of the National Advisory Cancer Council, recommend approval of a study by Dr. Jacob Gershon-Cohen to detect mammary cancers as small as one centimeter by X-ray. Robbins' log entry for the day includes this summation:

> Such tumors are entirely unsuspected....There is considerable prejudice among radiologists against this study. Radiologists say...this is impossible.... Ravdin said he knew it was better than palpation because recently he had seen several cases which...were predicted by X-ray, but on palpation, surgeons said no cancer was present. Surgery disclosed that cancer was present...proved on pathological examination....
>
> Dr. King [said]...this was not diagnostic but...only screening. Dr. Copeland objects to support of this study saying that a false sense of security would be raised by a negative X-ray....Dr. Rigler urged that we check for unnecessary radiation exposure in this study. The Radiology Section has already turned this study down. (44)

Gershon-Cohen went ahead with the study, without NCI support.

In January and February, 1961, Robbins was invited by Dr. R. Lee Clark to visit the M. D. Anderson Hospital to observe what Egan was doing in mammography. Robbins' encounter with a "garden variety" diagnostic radiologist from Ravenna, Ohio, who had mastered Egan's technique in five days, was the turning point. Reproducibility became the key. If an ordinary small-town radiologist could learn to interpret mammograms with the same precision of Robert Egan, then here, felt Robbins, was an early detection means that might be mastered by any properly trained radiologist.

By August, 1961, Robbins was already committed to the idea of reproducibility studies, which were funded and evaluated by the Cancer Control Program in 1961-62. These studies, in turn, set in motion a chain

of educational activities which characterized the Program's approach to breast cancer control. Concurrently, the National Cancer Institute, through Dr. Shimkin's Field Studies, sponsored what it considered a critical prospective research project awarded to the Health Insurance Plan of New York (HIP).

Pressure to examine the reproducibility of Egan's technique came from the M. D. Anderson Hospital, which was beginning to assert its influence as a major clinical cancer research center. Once teams of prominent radiologists, dispatched by Robbins to Houston, had seen the potential of Egan's technique, they concurred the only way to spread the technology was by testing whether or not other radiologists could master the technique with the same degree of accuracy that Egan displayed.

The debate over which route to pursue came to a head on May 23, 1961, when NCI Director Dr. Kenneth Endicott presided at a meeting to discuss the M. D. Anderson "reproducibility study" contract. It was attended by Drs. R. Lee Clark, Robert Egan, Michael Shimkin, John Paul Lindsay of Robbins' Advisory Committee, Mr. William Haenszel, who directed statistical services of NCI's Field Studies, and Robbins. His log for that day contains this point: "Dr. Shimkin pointed out that the real payoff of mammography was to determine whether treatment of cases found by mammography at an earlier stage than palpable cases would alter the 5-year survival [rate] of breast cancer [patients]." (45)

But Robbins did not grasp that the real issue was not survival, but mortality. Shimkin then mentioned that Dr. Theodore Hilbish, a member of his staff, had spent a week at the M. D. Anderson Hospital. Hilbish had reported to Shimkin that Egan's mammographic technique did turn up a

diagnosis of cancer before a biopsy was made in a high percentage of cases, as Egan claimed. Hence, Hilbish believed the reproducibility studies should be pressed. An entry from Robbins' log recorded, 'Mr. Haenszel believed that we should determine first what question the study was to answer. At this point I put on the board a table which had been developed the evening before by Dr. Clark, Dr. Egan, Dr. Lindsay and myself." (46)

The formulations proved persuasive. But they certainly did not address Shimkin's fundamental question: Could periodic mammographic examinations have a positive impact on breast cancer mortality?

But the group was convinced that reproducibility had to be tested. Robbins recommended that reproducibility study centers be well distributed throughout the PHS Regions, already contemplating their conversion into mammography training centers if reproducibility were established. Sixteen major medical centers throughout the United States and one each in Mexico and Canada were proposed. It was recommended that Dr. Clark approach each institution, discuss the proposed study with its leading surgeon, then with its diagnostic radiologist and pathologist. The Cancer Control Program staff would follow up with a formal protocol and careful explanation of the study requirements to insure comparability amongst institutions. Then the institution would arrange with Egan for training at the M. D. Anderson Hospital. The Program also planned to bring the study participants together periodically to discuss progress, results, and problems. (47)

Endicott approved the plan and study of the fundamental epidemiological question raised by Shimkin. (48) Both reproducibility demonstrations, managed by the Cancer Control Program, and a prospective case-controlled

research study under NCI Field Studies were pursued simultaneously.

The subsequent activities undertaken by the Cancer Control Program were entirely consistent with its objective of carrying new technology systematically to primary medical practitioners--in this case, mammography was introduced first to diagnostic radiologists, then to referring physicians such as surgeons and gynecologists. The Program deferred to the NCI research arm the critical determination of whether mammography would be effective for mass screening.

On the basis of the reproducibility experience, instructional materials were compiled and evaluated to train radiologists and mammography technicians. (49) A Center for Mammography Training was established with Program support at Emory University Medical School where Dr. Egan moved after a brief appointment in Indianapolis which Robbins had facilitated. And the initial conference on breast cancer detection in 1962, sponsored by the Program to bring mammography trainees together, became an annual conference, sponsored by the American College of Radiology during the 1970s.

Colorectal Cancer

Early detection of colorectal cancer, the most common cancer killer for several decades, was a great challenge to the Cancer Control Program--and a great frustration. At the National Advisory Cancer Council meeting on February 25, 1958, I. S. Ravdin asserted that 75 percent of colon-rectum tumors could be reached with the sigmoidoscope. (50)

Once again employing the strategy of public support to aid private physicians, Robbins and his small staff discussed a plan to instruct physicians and medical students in proctosigmoidoscopy. The idea was

promoted through the "Shop-Talk" professional education medium (see page 640) but it became obvious that neither physicians nor patients were going to submit routinely to this unpleasant examination in the absence of other indicative symptoms.

One of Robbins' staff recommended that a flexible fiberoptic proctosigmoidoscope be developed. Manufacturers were apprised, and eventually a series of contracts were let. Again, Robbins' log:

> Then he [the staff member] left. But his idea was so sound...I got hold of Marvin Pollard. He agreed to take a young Service officer (Bergein Overholt)... in his office. We wanted a 50-cm instrument that any family doctor could use. Well, it didn't go in that direction. The one he developed went to 6 feet--not 25 inches; not 11 inches--but six times as far! (51)

It was a time-consuming but not overly costly enterprise. And it was reminiscent of Kaiser's explorations with the cytoanalyzer and single cancer-detecting blood test. Technically, the central defect was unacceptable visualization; a second defect was length--an instrument was devised suitable not for screening large populations but only for diagnosis of selected individuals in whom a suspicion of a lesion was present.

Robbins assessed the disappointment this way:

> It went in the direction that would give the greatest aid to the profession, the gastroenterologist and the surgeon....Most colon-rectal cancers you can do something about are in that first foot. You cannot justify putting a fiberoptic instrument into everybody's cecum, periodically, but you could justify the first foot periodically, even in the hands of a family doctor. That is relatively simple. The yield is much greater--so you can use it for screening. (52)

Instead, under the stimulus of the medical specialists, instrumentation was developed to examine the entire colon, a diagnostic--not

screening--aid. Even today, while colonoscopy (see Book One, Chapter 6) is appropriate for selective diagnostic work-ups, the need for a short-range flexible fiberoptic instrument persists. But it may be that the self-administered hemoccult test, potentially easy to use and reliable to interpret, has replaced any incentives for developing a screening instrument that requires administration by a qualified physician.

Oral Cancer

Although Robbins preferred to concentrate on four major cancer killers--breast, lung, colon, and cervix--he "had to take cancer of the head and neck." (53) The results may well have been worth it. Developing slowly, using leverage with the American Dental Association (ADA), by 1962, $450,000 was available to fund demonstration projects in local communities and institutions employing oral cytology screening. The same 14 steps of cervical cancer cytology screening were adopted in oral cancer screening. By 1965, 10 projects had been established, examining close to 50,000 persons for signs of oral cancer. (54)

The Program also awarded five grants in 1963 for postgraduate dental education in oral cancer diagnosis. (55) Awards were made to the ADA to develop illustration sets for refresher training in oral diagnosis, to a local health department, a dental school, and dental dispensary--providing experience in a variety of settings. (56) A pilot study of oral cytology in three PHS hospitals and outpatient clinics was expanded in 1964 to all PHS Division of Hospital Clinical Facilities, providing important information on the value of oral cytology in controlling many head and neck cancers. (57) The Cancer Control Program

concentrated on exploring the value of oral cytology, developing standards and a statistical reporting system useful in reporting and following suspicious oral lesions.

A contract negotiated in 1963 with the University of Texas Dental Branch revealed considerable prescience: it was a pilot endeavor to train dentists in the construction of maxillofacial prostheses for cancer patients. (58) This was probably the first federal award of any dimension to concern itself with the rehabilitative potential and needs of persons with head and neck cancers--or any cancers, for that matter. (See Book One, Chapter 8.) By 1976, there were fewer than 100 maxillofacial prosthodontists actively working to handle this problem, and those were concentrated in a few major cities.

Other Key Developments

Beyond the site-specific approach to cancer control, utilizing early detection and, to a lesser degree, prevention of cancer by avoidance of cigarette smoking, of its own initiative, the Cancer Control Program established a number of other activities intramurally; and it acquired a number as the National Cancer Institute continued its "house-cleaning" of extraneous non-research programs.

By 1964, NCI had transferred the Radium Loan Program, the Nursing Division, and the Senior Clinical Fellowships Program to the Cancer Control Program in the Bureau of State Services. The Advisory Committee took a dim view of NCI's "dumping syndrome," unless it could influence the content and management of these acquisitions. The form and name of the Senior Clinical Fellowships Program were debated at some length by

the Advisory Committee and NCI hierarchy. (59) NCI wanted the Fellowships Program out, in conformance with congressional pressure to stop training potential fee-for-service clinicians. And, characteristically, NIH Director Shannon also wanted more resources to be invested in research training rather than clinical training.

Consistent with developments in medical specialization, the Senior Clinical Fellowships Program was made available to board-eligible physicians interested in a single additional year of supervised specialty cancer management experience. In 1962-63, 99 out of 141 applicants were awarded stipends, after review by Program-appointed panels of the five clinical specialties: surgery, pathology, radiology, gynecology, and internal medicine. $868,000 in grant funds were dispensed as stipends to trainees, not to the institutions where they would receive this additional training. (60) This level of activity persisted through 1965.

A contract awarded by the Program to the American College of Surgeons enabled the PHS to participate in the appraisal and improvement of hospital cancer registries and supported the American Joint Committee for Cancer Staging and End Results Reporting. (61) The Program awarded annual contracts to Hawaii to sustain its statewide tumor registry. One of the most useful awards was to the University of California-San Francisco Medical Center, where, under Calvin Zippin, Sc.D., a school for registry personnel was developed.

Once pathologists acknowledged that cervical cytology screening was desirable and acquiesced to having cytotechnicians taught how to screen cytology smears, the preservation of quality controls became paramount. Wood and others on the Cancer Control Advisory Committee, therefore, promoted an alliance between the Cancer Control Program and the National

Committee for Careers in Medical Technology--an organization jointly supported by the leading pathologist societies. A manual for cytotechnologists was developed, a pilot study of means to communicate technical developments to medical technologists was mounted, and experiments in continuing professional education were supported. (62) The Advisory Committee was also concerned with quality educational and performance standards among X-ray technicians who would administer mammography and medical technologists who handled blood. In 1965, through the National Committee, accreditation of cytotechnician schools was taken over by the American Medical Association, which previously performed similar quality inspections of medical residencies. (63)

From his first days in cancer control, Robbins was concerned with "communication of practice-ready information to medical and health workers in a form which will enable them to use it in their own communities." (64) This concern was translated, in time, into a professional education scheme called "Shop-Talk," aimed specifically at general practitioners.

> In principle, [it] would use the first law of education which is...readiness....This can be done best by beginning with 'shop talk' or the kind of language which he uses every day in the hospital and office. The program would be directed to a teaching experience, and physicians would be involved in preparing themselves for a meeting in which a single problem would be discussed...a single health problem, a newer knowledge that needs to be applied...an 'ivory tower' objective or action that the experts wish to stimulate in practice. (65)

The "Shop-Talk" method worked this way. Six months prior to a planned meeting of a statewide Academy of General Practice, at a regional Academy meeting, a panel of experts would make a brief videotape on a specific cancer site topic. The experts included an

internist, radiologist, surgeon, and general practitioner. The tape outlined the risks of the cancer in question among a general practitioner's own patients and discussed how to apply new knowledge. It would be pitched to the physician's need to know "What's in it for me?" "How much work will this be for me?" After the film was viewed, general practitioners could thrash out these details among themselves and also with the live "tumor team" who had aired the topic in the film.

Robbins enlisted Dr. John Paul Lindsay, an Academy statesman from Nashville, to make entrees to various state academies of General Practice. Health educators Ruth Richards and C. C. Conrath organized the presentations. By mid-1960, the first "Shop-Talk" promoting the Pap smear had been developed and tested. By 1963, a pilot study in Alabama involving up to 10 topic presentations around the state over several years had been completed. (66) The Program was able to package "Shop-Talk" for additional state academies (Massachusetts, Idaho, Washington, Montana, Oregon, and Alaska). North Carolina's Academy, in cooperation with the Student Medical Association and Duke Foundation, produced a "Shop-Talk" to interest medical students in preceptor training. The Alabama Academy developed a long-range leadership training program, with a Program-funded training consultant. A so-called "Physician's Institute for Group Discussion" ensued, with grant support. The Texas Academy of General Practice, in cooperation with M. D. Anderson Hospital, produced and distributed three "Shop-Talks" and some topics were highlighted in the M. D. Anderson's Cancer Bulletin, a periodical established originally with NCI Cancer Control Branch support. (67)

To test proliferation of "Shop-Talk," the Program conducted a fact-finding study in Louisiana jointly with the Commission on Education of the

American Academy of General Practice, in 1961-63. The conclusion was that designing educational methods and planning content around interests expressed by practicing physicians was a sound method of assuring acceptability. A feasibility and planning contract was awarded to Louisiana State University and the Louisiana Academy of General Practice to disseminate continuing cancer control professional education over five years throughout the state. (68) Cancer Control Program health educator Wilma Dean Henry was assigned to the project.

A major activity of Regional Medical Programs (RMPs), as they took hold in the late 1960s, was continuing professional education concerning heart disease, cancer and stroke. The evidence suggests that RMPs failed to sustain the technique or influence created by "Shop-Talk." The Academy of General Practice soon became the Academy of Family Practice, and stringent continuing education activities were required, in conjunction with recertification every five years to maintain specialty accreditation. While no evidence exists, it is likely that these recertification requirements were furthered by the "Shop-Talk" experience. Clearly, the well-cultivated relationship between the Cancer Control Program and the Academy facilitated development of the Office-Detected Cancer Screening Program, which engrafted the Papanicolaou smear into routine general medical practice.

Relationships with Cancer Control Professionals and State Health Agencies

The other segment of "health workers" for whom the Cancer Control Program assumed some responsibility was the small cadre of cancer control workers in the states. Aggregate annual state subvention monies maintained a level of $2.25 million until 1961, when it was increased to $3.75 million.

The appropriation levelled off to $3.5 million in 1962, and nearly all of it was allocated and expended. Consultation by Program staff was provided, but there is little documentary evidence that from 1960-65, many new ideas were being adopted within the states to promote cancer control. In several states, however, the health department leadership was sympathetic to cancer control. Public and voluntary health agencies or institutions were urged to compete for both the available federal-state subvention funds and the Special Project contract and grant opportunities managed by the Program.

Early in Robbins' tenure, there was a request by the M. D. Anderson Hospital to move staffing of the Public Health Cancer Association (PHCA) out of the federal Cancer Control Program to that private institution. NCI and PHS officials quashed that move. (69) Robbins' staff revitalized the Association, structuring stimulating annual meetings concurrent with American Public Health Association annual meetings. The Public Health Cancer Association meetings became a good platform for Program staff to promote some of their current interests. At the special 20th anniversary meeting in Boston, for example, group meetings were held on several topics: how to plan a cancer control project; uses and limitations of mammography; "Shop-Talk"; uses and limitations of oral cytology; and programmed learning for cytotechnician training. The plenary session at that same 1963 meeting was devoted to behavioral aspects of cigarette smoking, including a panel of teenagers discussing: "Do I want to begin to smoke?" (70) The meetings attracted between 75-200 individuals.

The closest the Public Health Cancer Association may have come to activist expression was its posture on federal action concerning cigarette smoking. In February, 1965, PHCA President Dr. John Dunn wrote to

Congressman Fogarty, Chairman of the House Subcommittee on Appropriations for Labor and Health, Education and Welfare:

> It seems almost unbelievable that we as a nation that pride ourselves on our high level of knowledge and intelligence can have stood by and observed the relentless accumulation of evidence of the causal relationship of cigarette smoking to the great majority of cancers...and yet have failed to launch a vigorous federal program to make this become unequivocal common knowledge....The Surgeon General's Report... should have convinced the most reluctant skeptic.... There is little excuse for further delay....It is the fervent hope and urgent appeal of the American Public Health Cancer Association that the Congress make possible the support of this important first step [National Clearinghouse on Smoking and Health].... Nothing we now know about any human cancer, or perhaps will ever know, has the potentiality for preventing so many cases of an almost hopeless form of cancer [lung cancer]. (71)

A month later Dunn wrote to Senator Warren Magnuson, a friend of cancer research and control since the late 1930s. Magnuson was then Chairman of the U.S. Senate Committee on Commerce. The issue was a hazardous substances labeling of cigarettes in advertising as well as on packages:

> Considerations of economics and revenue frequently distort better judgment....The cigarette smoker would be better off if he paid his tax and kept the money the cigarettes represent. As for the cigarette manufacturing industry, should it not be allowed to gradually fade away along with the present generations of people it so successfully habituated?...Misleading advertising should not receive tacit governmental sanction by allowing the omission of the factual statement as to the health hazard involved. (72)

The Public Health Cancer Association tended to remain limited in voice and effectiveness, probably because it did not solicit or integrate into its ranks the more vocal forces of organized oncology specialty groups or state cancer commissions. Its isolation from the mainstream of organized medical decision-making gave it a curiously

quaint existence. Had it become incorporated into the parade of clinical oncologic societies, or had its membership actively sought spokesmen from organized medical and oncology groups, its destiny might have been quite different. The Public Health Cancer Association limped along through the 1960s, during a period of organizational tumult within the Public Health Service, and finally collapsed in 1974.

Reflections on the Period 1957-1965

By 1965, when Lewis Robbins decided to move out of Cancer Control Program leadership, the annual Program budget had progressed from the paltry $60,000 in 1957-58 to about $10 million, plus $2.5-$3.5 million as the state subvention monies. Robbins believed the Program had all the funds it could use wisely. (73)

It is a curiosity that, at the apparent crest of the Program's success, Robbins decided to move on.* Throughout his Program tenure, he had continued to pursue his interest in the Health Hazard Appraisal--or risk factor--analytic approach to disease control. His experience with cancer control only reinforced his philosophy that many disease processes could be forestalled by systematic attention to risk factors, and that the family practitioner, given the tools to analyze his individual patients, could devise tailor-made disease control plans for each patient.

The success of the federal Cancer Control Program, 1957-65, can be measured quantitatively: substantially increased numbers of American women received their first Papanicolaou smear; a growing cadre of cyto-

*Robbins retired from the Public Health Service. For the past decade, he has been the principal spokesman of the Health Hazard Appraisal system and Prospective Medicine techniques of assessing individual health and risk factors by primary care physicians.

technicians and mammography personnel were trained; a corps of clinical fellows were readied to manage cancer in communities.

Apart from these quantitative achievements, certain qualitative aspects of the Program reflected profound gains. There was clearly a heightened awareness among primary physicians, and to a lesser degree among public health workers, that advances in cancer control were achievable if systematic, high quality programs were implemented. Relationships with the several professional specialty bodies intrinsic to progress were given priority.

The Program made no attempts to monopolize cancer control. If Robbins and his staff recognized one fact early, it was that the job had to be done through organized medicine and its specialty enclaves. Cultivating and offering assistance to these bodies was the only guarantee of cooperation and receptivity. The concentration of effort with the American Academy of General Practice, with incentives for learning new skills, far surpassed what the American Cancer Society (See Book Two, Chapter 10) had been able to accomplish with the same population, because the dealings were direct and the Program devised activities to meet the family practitioner on his own ground.

By so doing, Robbins and the Program staff paid less attention to the American Cancer Society and American College of Surgeons than their predecessors had. There was cooperation, but the degree of inter-dependence between the federal effort and the voluntary sector was much less than there was previously.

The Program concentrated on early detection as the most effective dimension of cancer control. The approach was systematic and incorporated the principle of demonstration before dissemination. The general approach

was to establish adequate human resources and facilities, with quality controls built in to both elements. This was true whether the organ site was the uterine cervix, the breast, or the oral cavity. The strategy required organization, financial incentives for participation, education for continuing knowledge, and a commitment to quality standards. From this operating formula emerged the 14 steps for cervical and oral cancer screening activities and the mammography reproducibility project.

A second important characteristic of this period is the pursuit of "practice-ready" cancer control means. The aim was to adapt new technology and systematic disease control for use by primary care practitioners. Mammography reproducibility, the Office-Detected Cervical Cancer Screening program, and "Shop-Talk" particularly reflected this theme.

The Cancer Control Program met with the same frustration as its predecessor Field Investigations and Demonstrations Branch in the area of technological development. The development of a fiberoptic endoscope for use in the lower bowel did not materialize as expected. The resulting instrument could only be used selectively by specialist-diagnosticians, not primary care practitioners.

The Program did little about primary prevention of cancer. Too little practical information--apart from avoiding cigarettes--was available. Activities directed at avoiding chemical carcinogens, it appears, were essentially ignored by the Program. No guidance or impetus came from the NCI to develop demonstration projects in prevention. Similarly, rehabilitation was given only token emphasis--only a few projects were supported. The approach to cigarette smoking, given the constraints of federal action, were focused but limited: determining the behavioral

influences among physicians and potential smokers--youth and adults--was a significant scientific contribution to this enormous health problem.

Developments in the NCI, especially the growth of the Cancer Chemotherapy National Service Center (from 1953 forward) and establishment of cooperative clinical trials, precluded the Program from entering actively in treatment demonstrations. Given the public health orientation of Robbins and his staff, venture into treatment demonstrations might have been difficult. Medical schools and institutes were clearly the foci for clinical trials; the only experience Program staff had with those institutions, apart from the M. D. Anderson Hospital, was management of the Senior Clinical Fellowship Program. The reality was that the biomedical research establishment had "captured" the medical schools by the 1960s.

The Program devised ideas which could readily be packaged and picked up by state health agencies. By keeping its finger on the pulse of the Public Health Cancer Association, contact with state cancer control personnel was direct, but not intrusive. The Program did not dictate to states what should be done, but did provide funds, consultation, marketable ideas, and local options. This laissez-faire posture, while not inspiring, certainly enabled the Program to maintain cordial relations with state health departments in which reasonably sound programs were in progress and to introduce new ideas and funding opportunities to less assertive states.

The Program grew in strength and competence as the Advisory Committee took hold and Robbins assembled staff who regarded him as a diligent, supportive leader. In contrast to his small physical stature and gentle manner, he commanded enormous respect. It is the view of those who worked

with him that he had a way of inspiring his staff to explore, to document, to establish relationships, to do the best possible job. He listened to them and valued their ideas. He never claimed their ideas as his own. (74) His personal warmth and total immersion in the Program inspired the confidence of his hand-picked Advisory Committee. (75) He was non-threatening to the NCI personnel, who were continuing to garner larger and larger appropriations for fundamental and clinical research.

While the Control Program sputtered at first, and was revived slowly, related components of the NCI grew more rapidly. Biometry and Epidemiology became firmly established units. But the NCI Field Investigations and Demonstrations Branch, denuded of most appendages, essentially disintegrated. Research training was boosted. After the initial game-playing over budget control of the program, from 1957-60, competition from the NCI to control Cancer Control Diminished. There was, it appears, less and less actual contact between the NCI and the Program, as it became increasingly integrated into the Division of Chronic Diseases of the Public Health Service, with a clear identity of its own, emancipated from the limited vision of research-oriented proponents. The NCI had so much money to spend from 1959-65 that proprietary interest in cancer control faded rapidly.

(1) Interview with Dr. Kenneth Endicott, Administrator of the Health Resources Administration; former Director, National Cancer Institute, by Devra Breslow of HCCP, May 19, 1976, Rockville, Md.

(2) Research and Related Programs of the National Cancer Institute. PHS Pub. 458A. Washington, D.C., U.S. Govt. Printing Office, 1961.

(3) Interview with Dr. Michael Shimkin, Professor of Community Medicine and Oncology, University of California-San Diego School of Medicine; former Chief, Field Studies, National Cancer Institute, by Larry Agran and Devra Breslow of HCCP, January 27, 1976, La Jolla, Ca.

(4) Interview with Dr. Lewis Robbins, former Chief, Cancer Control Program, by Lester and Devra Breslow of HCCP, November 20, 1975, Indianapolis, Ind.

(5) See note (4).

(6) Cancer Control Program Activities. A Report for the National Advisory Cancer Council, November, 1963, p. 4. (mimeo)

(7) See note (4).

(8) See note (4).

(9) See note (4).

(10) Log of Dr. Lewis Robbins, October 13, 1961.

(11) Log of Dr. Lewis Robbins, January 24, 1962.

(12) Activities of the Cancer Control Program, Fiscal Year 1962. Report to the National Advisory Cancer Council, November, 1962, addendum. (mimeo)

(13) Annual Report of the Surgeon-General. Washington, D.C., U.S. Govt. Printing Office, 1965, at 171.

(14) See note (6).

(15) See note (6).

(16) Interview with Dr. David Wood, retired Director, Cancer Research Institute, University of California-San Francisco Medical Center; former Chairman, Cancer Control Advisory Committee, by Leon Ellwein and Devra Breslow of HCCP, October 11, 1976, San Francisco, Ca.

(17) See note (13).

(18) See note (13).

(19) See note (4).

(20) See note (4).

(21) Dr. William Ross: Cancer Control Program Activities. Report to the National Advisory Cancer Council, November, 1969, p. 3. (mimeo)

(22) See note (4).

(23) See note (4).

(24) See note (4).

(25) Log of Dr. Lewis Robbins, January 26, 1962.

(26) Log of Dr. Lewis Robbins, May, 1958.

(27) Horn, D.: Current smoking among teenagers. Pub. Health Repts. 83: 458-460, June, 1968; also Green, D.E., Horn, D.: Physicians' attitudes toward their involvement in smoking problems of patients. Dis. Chest 54:180-185, September, 1968; also Horn, D., Waingrow, S.: Some dimensions of a model for smoking behavior change. Am. J. Pub. Health 56: Supp. 56:21-26, December, 1966.

(28) Log of Dr. Lewis Robbins, January 3, 1962.

(29) See note (28).

(30) Log of Dr. Lewis Robbins, January 4, 1962.

(31) See note (30).

(32) See note (6) at 7.

(33) See note (12) at 8.

(34) See note (6) at 7.

(35) See note (34).

(36) No reference is made in subsequent National Advisory Cancer Council reports.

(37) See note (6) at 7.

(38) See note (4).

(39) Haagensen, C.D.: Diseases of the Breast, 2nd ed. Philadelphia, W.B. Saunders, 1971, Chapter 34, at 669-728.

(40) MacDonald, I.G.: Biological predeterminism in human cancer. Surg., Gynec., & Obstet. 92:443-452, April, 1951.

(41) See note (40) at 449-450.

(42) See note (40) at 449.

(43) See note (40) at 450.

(44) Log of Dr. Lewis Robbins, February 25, 1958.

(45) Log of Dr. Lewis Robbins, May 23, 1961.

(46) See note (45).

(47) See note (45).

(48) See note (45).

(49) See note (3).

(50) See note (44).

(51) See note (4).

(52) See note (4).

(53) See note (4).

(54) See note (13).

(55) See note (6) at 3-4.

(56) See note (6) at 3-4.

(57) See note (6).

(58) See note (6).

(59) Log of Dr. Lewis Robbins, April 8-9, 1962, and other dates.

(60) See note (6) at 7.

(61) Dr. William Ross: Cancer Control Branch Activities. Report to the National Advisory Cancer Council, November, 1966, p. 3. (mimeo)

(62) See note (12) at 6.

(63) See note (13).

(64) Annual Report of the Surgeon-General. Washington, D.C., U.S. Govt. Printing Office, 1962, at 177.

(65) Log of Dr. Lewis Robbins, December 17, 1959.

(66) See note (6) at 5.

(67) See note (6) at 5.

(68) See note (6) at 5.

(69) Log of Dr. Lewis Robbins, several dates in 1957 and 1958.

(70) Public Health Cancer Association. Agenda, May 16-17, 1963 Annual Meeting. (mimeo)

(71) Correspondence. Dr. J.E. Dunn to Congressman John Fogarty, February 23, 1965.

(72) Correspondence. Dr. J.E. Dunn to Senator Warren Magnuson, March 17, 1965.

(73) Interview with Dr. Lewis Robbins, former Chief, Cancer Control Program by Lester and Devra Breslow of HCCP, November 20, 1975, Indianapolis, Ind.

(74) Conversations between Devra Breslow of HCCP and William Melton, Jose de la Puente, Ruth Richards, and George Pickett.

(75) Conversations between Devra Breslow of HCCP and Dr. David Wood and Dr. Thomas Carlile.

CHAPTER 7

THE HEYDAY AND THE COLLAPSE 1965-70

In July, 1965, when Robbins left as Chief of the Cancer Control Program--now a distinct Branch--the major program components were in place. The principles he and his mentors articulated in the late 1950s had been translated into action. Budget proposals for the next two years, if approved by Congress, would foster systematic program expansion, along site-specific pathways. Relationships between the Program and the National Cancer Institute were formalized: Robbins and his staff still turned to NIC management and scientific sectors for ideas, but they were guided by and felt accountable to their own Cancer Control Program Advisory Committee. Members of that Committee, in fact, helped to improve relationships between the Program and the American Cancer Society, the American College of Surgeons, American College of Radiology, College of American Pathologists, and American Academy of General Practice, among others. New relationships were forged with the National Committee for Careers in Medical Technology; the Program was influential in fostering the Inter-Society of Cytology.

Although the Branch was administratively based in the Bureau of State Services, apart from dispensing subvention funds, it did not provide direct services to state public health agencies.

Principal Researcher/Writer: Devra M. Breslow

The Branch, however, was responsive to consultative needs. Public health agencies were apprised and urged to apply also for Program contract and grant funds, as well as use their subventions effectively.

Robbins had forged a team of conscientious staff members. They knew what the program objectives were, how to work with their Advisory Committee, and how to move forward systematically to put more cancer control tools and information into the hands of American medical and health practitioners.

Meanwhile, the President's Commission on Heart Disease, Cancer and Stroke had issued its report in 1964. (1) It called for increased congressional support for, among other pursuits, cancer management and control. But how the new mechanism for implementing the Commission's plans--Regional Medical Programs (RMPS)*--would relate to the existing Cancer Control Program activities was not spelled out.

Dr. William Ross was recruited by Robbins' immediate chief, Dr. Eugene Guthrie, to replace Robbins. By 1965, Ross had already spent over 20 years in government health service. In addition to brief periods in control programs focused on hearing, speech and eye diseases and heart disease, he had a brief stint as a local health officer following public health graduate studies at Johns Hopkins. For six years, he had been in the Office of the Surgeon General (under Doctors Scheele, Burney, and Terry), where he established a physician recruitment program for the U.S. Public Health

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* Technically titled the Regional Medical Programs Service, the acronyms RMPS and RMP are used interchangeably in this text.

Service. It was here that Ross first became interested in films and other educational media, an interest to which he returned while Cancer Control Branch Director. Immediately prior to his appointment as Branch Director, Ross was the Regional Consultant for Chronic Diseases and Associate Regional Director of the midwest HEW regional office.

Before he moved on, Robbins gave Ross a thorough orientation. It would stand Ross in good stead through the tumultuous years ahead, as the Public Health Service underwent constant reorganization. Six months after Ross began in his new post, RMPS was enacted. While cancer control was slated to receive enlarged congressional appropriations, the deck was stacked against growth. Ross soon found himself presiding over a doomed patient.

Hints of unrest at the National Cancer Institute were presented to Robbins and Ross on June 9, 1965, when Dr. Endicott oriented Ross. Endicott told both men: " 'The National Advisory Cancer Council [is] hoping to take over cancer control activities. Their present concern is to see a much wider approach to cancer control.' Dr. Endicott said that he had to request [of] them personally not to embarrass him by sending forward a memo to the Surgeon General..." (2)

Endicott offered three suggestions that day to expand cancer control--and presumably to make peace with a restive Council that had lost authority over $12 million of annual funding and determining the form and scope of the federal cancer control effort:

. move the CCP geographically closer to the NCI, especially to the Field Studies Offices (see page 591)

. return to the NCI the authority to justify the Program's budget. Congress had been approving the Program's funds [in the Bureau of State Services] without difficulty, but Endicott thought he could get more funds than the Division of Chronic Diseases, Bureau of State Services, had secured

. return to the National Advisory Cancer Control the right of final review of project grants. (3)

As Robbins recorded in his log, Endicott felt the last point was a perfunctory accommodation. (4) He made these suggestions--all of which would restore cancer control to the research-bent NCI--at a time of increasing professional frustration. A friend of the Program, he admitted he was himself thinking of leaving the Institute. (In fact, in 1968 he did, to direct the Health Resources Administration.) Endicott mentioned a "natural breakdown" in responsibilities for medical education and training between the Cancer Control Program and the Institute. The Institute was interested in "the man in the white coat," from which Robbbins surmised the NCI wanted to regain control of the Senior Clinical Traineeship program, while permitting the Cancer Control Program to retain its successful continuing professional education of primary physicians. (5)

Apparently, Endicott's recommendations were not pursued. The National Advisory Cancer Council did not regain the right of final review of Program grants. The budget was defended by the Division of Chronic Diseases, Bureau of State Services. Cancer

control was administratively lumped with hospital construction, nursing education, dental public health, communicable disease control, accident prevention, and other chronic disease programs. In 1967, all chronic disease programs were embraced within a newly entitled National Center for Chronic Disease Control, within the Bureau of Disease Prevention and Environmental Control of the USPHS.

In April, 1968, "the most extensive reorganization of the Public Health Service in history" (6) took place: Regional Medical Programs Service (RMPS) had been established by PL 89-239, 1965 (see pages 675-688). Designed to "close the gap" between knowledge and technology, RMPs devoured the eight elements of the National Center for Chronic Disease Control, of which the Cancer Control Program was one. RMPS was buffetted as well: administratively placed first in the National Institutes of Health in spring, 1968, moved to the Health Services and Mental Health Administration. Some of the "developmental" projects being supported by a booming Cancer Control Branch were transferred to the National Center for Health Services Rearch and Development. By mid-1970, the administrative convolutions were over. The federal Cancer Control Program, having been dismembered, reorganized, and disenfranchised, fully collapsed. No funds were appropriated. In five years, 1965-1970, the carefully regained and identifiable program--whatever its limitations in scope--was obliterated.

Endicott might have been correct that the Cancer Control Program budget should have been restored to the National Cancer Institute.

For the first two years after Robbins departed, the Program (Branch) sustained the best elements generated or acquired under his direction and expanded in several other areas. At its peak, fiscal year 1967, the Branch was spending $21.5 million on a variety of control activities.* But, as expressed in the Surgeon-General's Annual Report in 1970, "because of budgetary and program needs, five chronic disease programs--cancer, diabetes and arthritis, chronic respiratory disease, heart disease and stroke, and neurological sensory diseases--were phased out...Efforts were made to insure the integration of as many chronic disease activities as possible within the Activities of the Regional Medical Programs at both the national and regional levels." (8) The annihilation of cancer control as a distinct program entity fulfilled the prophecy of HEW Secretary Wilbur Cohen, who said on concluding 34 years of federal service: "We must be aware of endless, separate quests for different, cleaner separations and neater classifications for the formidable problems of human welfare.... The [problems] do not yield to easy compartmentalization. They won't go away just because you put them in a separate box on a new organization chart." (9)

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* Of this $21.5 million, $15 million was for project grants. Eight million of this sum was a supplemental congressional appropriation in fiscal 1966 and 1967 for cervical cancer detection programs. Three million went to states, as subvention monies, and in fiscal 1968 were moved to Comprehensive Health Planning without categorical specificity. The $3 million balance was appropriated for contracts and program operations.

During this era, cancer control program activities were based primarily in the Cancer Control Branch. Initially within the Bureau of State Services, Division of Chronic Diseases, in 1968, the Branch moved administratively to Regional Medical Programs Services.

Independently, by new legislative mandate, RMPS had its own cancer-focused mission and staff to promote cancer-related activities through cooperative arrangements among designated regional participants (see p. 688). RMPS cancer activities were not known as "cancer control," although they were meant to be. Thus, for at least two years, 1968-70, two separate cancer control programs coexisted within RMPS.

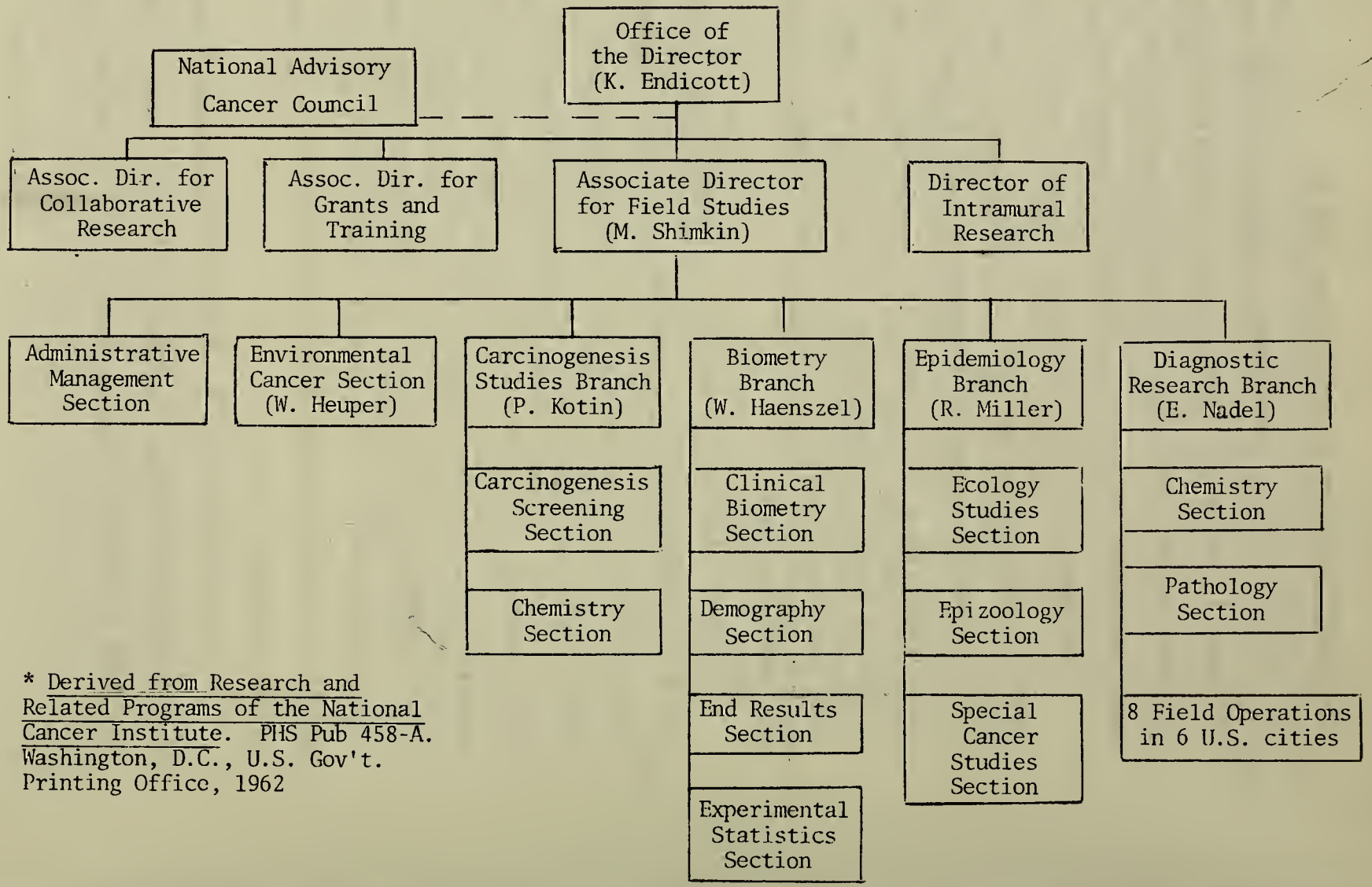
The third element, the source of scientific leads for application in community settings, remained a part of the National Cancer Institute. What had started as a broad-based field investigations element for cancer control--the kind of element that had led to knowledge of cigarette smoking and lung cancer, and had conducted field studies of cervical cytology--was stunted in its growth. Epidemiology and biometry, the core necessary for genuine field studies, and even carcinogenesis studies, were dwarfed by the pursuit of viral approaches, mainly in the laboratory, to understanding the etiology of cancer.

The following charts 1-3 trace the evolutionary development of that critical resource. Entitled Field Studies when formed in 1960 under Dr. Michael Shimkin's direction, it became the Etiology

Chart 1

Field Studies Organization
National Cancer Institute

1961*



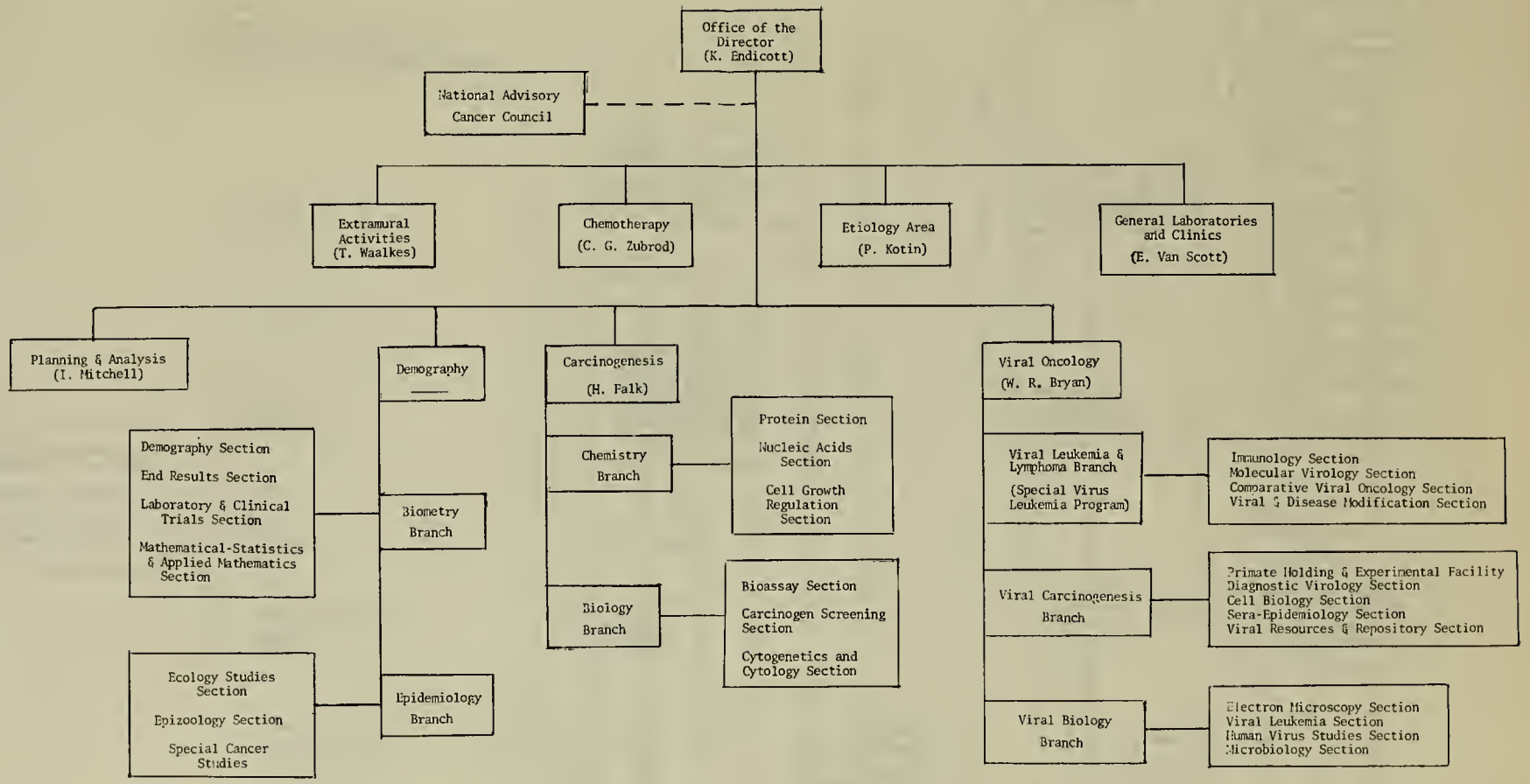
* Derived from Research and Related Programs of the National Cancer Institute. PHS Pub 458-A. Washington, D.C., U.S. Gov't. Printing Office, 1962

Chart 2

Etiology Area Organization

National Cancer Institute

1966*



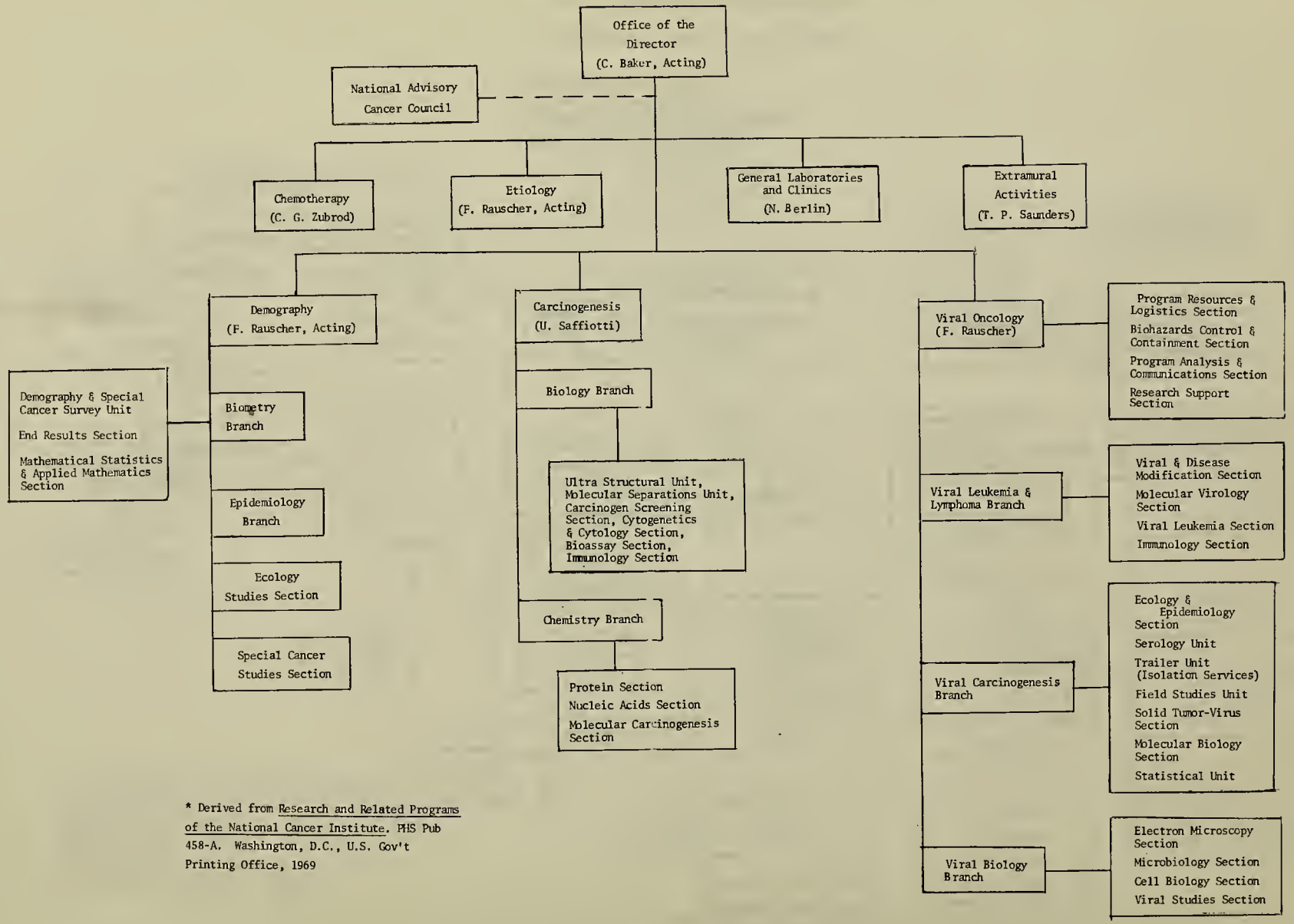
* Derived from Research and Related Programs of the National Cancer Institute. PHS pub 458-A. Washington, D.C., U.S. Gov't Printing Office, 1967

Chart 3

Etiology Organization

National Cancer Institute

1969 *



* Derived from Research and Related Programs of the National Cancer Institute. PHS Pub 458-A. Washington, D.C., U.S. Gov't Printing Office, 1969

Area in subsequent reorganizations. While Congressional appropriations for the entire National Cancer Institute increased from $91 million in 1960 to $150 million in 1965, to $180 million in 1969, (10) viral oncology became a favored recipient of the increased appropriations.

In 1964, the Special Virus Leukemia Program was initiated by a special congressional appropriation of $10 million. The research conducted through this program was "predicated upon the underlying belief that at least one virus is causally related to human leukemia and lymphoma and persists in the diseased individual." (11) Here the cooperative clinical trial concept, which would become so important in treatment aspects of cancer control (see Book One, Chapter 7), was employed. Concurrent animal studies, especially on animals which shared the human environment, were also developed "to yield answers to the possible interrelationships of leukemia and provide models for the study of human disease." (12)

Cancer Control Branch Activities, 1965-1970

During this period, 1965-70, the Cancer Control Branch expanded several activities initially developed during 1960-65 under Lewis Robbins' direction.

From 33 in 1965, 115 cervical cancer screening projects were functioning in 1969. Over 2.3 million examinations had been conducted in four years, including annual repeat examinations: 11,673 cases of cervical cancer had been detected; over one-third were invasive carcinoma. (13) The Program provided technical review of grant applications, project visits by staff and consultants, feedback of cumulative data, and multidisciplinary consultation. The original demonstrations were directed by a variety of sponsors: local health departments, voluntary health agencies, or professional medical societies. By November, 1966, Dr. William Ross could report that 91 cervical cancer case-finding projects were in operation, a 180 percent increase over the previous year. (14) The supplemental appropriation to push the Papanicolaou smear had made rapid expansion possible. Most of the new projects were established in large, metropolitan hospitals which served indigent patients. In the ensuing three years, the Program also encouraged some smaller general hospitals to participate. The hypothesis was that quality control of cytodiagnostic services and follow-up services especially would be a greater problem in non-hospital based projects. (15)

The "Office-Detected Cervical Cancer Program," launched in 1965 as a pilot project with three state academies of the American

Academy of General Practice, was also sustained. Within a year, Ross reported that 32 state academies had been organized to participate. (16) The Program emphasized how to organize state committees and the establishment of a central reporting system. As an adjunct to the hospital-based screening efforts, the Program expected to learn about the prevalence of cervical cancer among a private patient population. Distressingly, in 1966--23 years after the Papanicolaou-Traut monograph--35 percent of women in the program claimed to be receiving their very first Papanicolaou smear. (17) (see Book One, Chapter 4). By 1969, the last year for which data are available, 40 state academies were participating: 6,000 physicians had performed 1.4 million examinations that year, a steady increase over previous performance. (18) More than 2,900 carcinomas were detected. This was particularly impressive, as the population being served was not at highest risk. It was a cross-section of middle-class and less affluent women. In July, 1969, physical examination of the breast was added to the program: of the first 12,543 women so examined, 213 masses were identified, but no follow-up information was available when Ross made his report four months later. (19)

From 1965-70 the branch also continued to support mammography training. Following the American College of Radiology-sponsored Standardization Conference in 1965, which endorsed the Egan technique, the numbers of Branch-supported training centers grew from 6 to 11. About 525 teams of radiologists and technicians were provided training annually in these centers. The numbers

began to diminish toward the end of the decade, but after 1964, more than 1,300 radiologists and 1,200 technicians had received training in Branch-supported training centers, using teaching aids prepared jointly by the Branch and the College. (20)

Mr. William Melton, originally recruited by Robbins, remained titular head of the mammography training component for several years. In light of the 1976 controversy about the possible hazards of mammography, the level of concern 10 years earlier is of interest. Ross asked his Assistant, Dr. Catherine Hess, to handle "routine matters" with Melton. Dr. Hess revealed to Ross her concern about the potential radiation hazards in the training centers. (21) Calibration of the mammographic equipment in these centers was not a Branch responsibility. Dr. Hess proposed that the Federal Bureau of Radiological Health look into it. Ross recalls he was recovering from surgery when the Bureau began its inquiries. Ross was never convinced of Dr. Hess's allegations that Melton and the center radiologists had been lax about monitoring the training center equipment or careless in permitting repeat mammographic examinations by technicians-in-training. (22) Melton remained with the Branch until 1970, when he joined the American College of Radiology as director of its Chevy Chase office, where he has been instrumental in assisting the College to mobilize programs of continuing professional education.

Training projects continued in other areas besides mammography. $5.3 million was being expended in 1967-68, of which $1.1 million supported 112 Senior Clinical Fellows in dentistry as well

as medicine. (23) Seventy-one approved schools of cytotechnology, producing about 540 graduates a year, were aided by $1.3 million. (24) Forty-eight projects around the nation, funded at $1.3 million enabled house staff, attending staff, and community physicians to profit from continuing professional education. (25) The balance was expended on a variety of cancer detection courses, symposia, short-term training of medical technologists, and a continuing endeavor, the postdoctoral training of dentists in maxillofacial prosthodontics. (26)

The National Clearinghouse on Smoking and Health was given distinct Branch status in 1965, but the review for project grant funds for smoking control programs and smoking-lung cancer proposals was retained by the Cancer Control Branch and its Advisory Committee. (27) Forty-five grants and contracts were awarded by the Clearinghouse in its first year as a separate branch, aimed at developing a comprehensive information program; behavioral, psychological, and social science research; and direct assistance to state and local communities to develop smoking cessation and education activities. (28)

Studies to develop a flexible fiberoptic proctosigmoidoscope continued. A clinical trial was projected for 1967, but no information is available concerning whether it was conducted or with what results. In late 1966, Ross advised the National Advisory Cancer Council that limited grant funds were available for colon-rectum cancer demonstration projects, but no adequate proposals had been received.

With the help of the American College of Radiology, the first Standardization Conference for colon cancer was supported. Ross advised the NACC the "Enthusiasm was so great it was planned to have an annual conference and expand to include other groups. The Cancer Control Program was to supervise the printing of the minutes of the conference and disperse them to a wide range of physicians." (30)

Some evidence of progress with endoscopy must have been available, however, for a contract was awarded in 1968 to develop five flexible endoscopes which could view the throat, larynx, bronchial tubes, stomach, and a portion of the colon. The IIT (Illinois Institute of Technology) Research Institute of Chicago, one of two agencies originally funded to develop a colonoscope, received $150,000 for this purpose. (32) A year later, evaluation of the gastric camera used in conjunction with flexible endoscopes was funded. (33)

Relationships with states remained functionally unchanged until implementation of the Comprehensive Health Planning (CHP) Act of 1966. This Act abolished all categorical grant mechanisms, such as the cancer control subvention funds, which had been dispensed steadily since 1947. Instead, 314 (d) and (e) grants--non-categorical block grants and special demonstration project grants--became available. While in 1966, Ross could report a favorable trend in state support of case-finding and diagnostic services, (34) by 1968, the Branch no longer had any direct impact on States, either by giving them monies directly or reviewing plans for those expenditures. (35)

In late 1968, the Branch joined with the Association of State and Territorial Chronic Disease Program Directors and PHS Division of Chronic Disease Programs to assess the impact of Regional Medical Programs and Comprehensive Health Planning (CHP) pursuits on state chronic disease activities. It was probably too soon for definitive results. Half of the states reported no alteration in program; one-quarter indicated the CHP legislation had weakened their efforts; half of the states indicated RMPs had strengthened their programming. (36) In 1969, the Branch joined with the Committee on Chronic Illness and Rehabilitation of the American Public Health Association to draft Community Programs for Chronic Disease Control, a manual to assist program planners and administrators. (37)

In 1966, seven physicians were detailed by the Branch to state health agencies and three to medical schools, a sizeable increase over the two detailed officers in 1965. (38) The principle of direct federal assistance in states and institutions established in the 1940s was not altered; there was simply more money available to do everything, including dispatching cancer control officers where they might "plant some seeds."

Within 18 months after its transfer to the Branch in 1964, the Radium Loan Program was re-evaluated. Requirements for loan participation were strengthened; new agreement documents were drafted. Some agencies withdrew from this endeavor either because of the more stringent requirements or, more likely, because they had converted to using other radioactive sources. Because

the Branch lacked long-term storage facilities for radium, it moved to concentrate its supply into a few radiation therapy centers and stimulated a referral system. Data collection and analysis, special studies, and personnel training were similarly consolidated. (39)

The Branch moved forward in two major directions not extensively exploited in the past: head, neck, and oral cancer control and public education through independent production of television films. Demonstration projects resulted in a more enlightened approach to management of head and neck cancers. But the use of television threatened the American Cancer Society's traditional sphere and did not win Ross much favor with the Society. The program also allocated increasing sums to extramural contractors for developmental research.

Following a January, 1966, oral cancer conference, the Branch began developing more teaching aids and stressed in demonstrations the team approach to management of head and neck cancers. The original demonstrations explored the use of oral cytology, developed standards and a statistical reporting system--the background of disease control. The newer projects were oriented toward prevention and early detection. One was a pilot study regarding the long-suspected relationship between alcoholism and cancer of the head and neck. (40)

The Program published the proceedings of two oral cancer conferences and made plans to publish a monograph on maxillofacial

prosthetics and an Atlas of Oral Cytology. (41) "Plans made to prepare teaching sets of photomicrographic transparencies of oral cytology material were not carried out due to fiscal restrictions," Ross reported to the National Panel of Consultants on the Conquest of Cancer. (42)

The Program supported an oral cytology study involving 15 medical and dental experts, from which a statement regarding the value of oral cytology was issued. In the second year, in-depth review of 25 prescreened oral cytologic slides was conducted by these same experts to concur on criteria of malignancy. The purpose, ultimately toward standardization of pathological interpretation, was truncated when the Cancer Control Program collapsed, however. (43)

Production and distribution of several teaching films was underwritten by the Program, as was support for diagnostic educational aspects of the American Dental Association's annual meeting. (44)

In an unusual expansion of Program thrust, a project was funded through PL-480 monies to develop an oral cancer detection project in Pakistan, a nation where oral cancer is highly prevalent. As a consequence of the project, Pakistan's first oral cancer diagnostic and treatment center was established at the Jinnah Postgraduate Medical Center in Karachi. Similar overtures were made to Ceylon to conduct a clinico-pathological study of oral cancer, but PL-480 funds there were unavailable before the Cancer Control Program itself collapsed. (45)

Ross appeared in the teaching film "Oral Examination," which won the first place award in the Section of Laryngology, Otology and Rhinology at the 1966 annual meeting of the American Medical Association. (46) The Journal of the American Dental Association praised the "unusually comprehensive interprofessional head and neck cancer program" in an April, 1966, editorial. The editorial praised Ross by name, but in his annual presentation to the National Advisory Cancer Council, Ross wrote that "most of the credit belongs to Dr. Richard L. Hayes," who directed the head and neck and oral cancer aspects of the Program until its demise. (47)

As with its predecessor agencies, the program was tempted to support or directly engage in developmental research. Although the Program had no physical or human resources to conduct such research intramurally, the contract mechanism permitted exploration of the potential of several site-specific means of early cancer detection. One project was supported to determine whether exfoliative cytology could be used to detect gastric and esophageal cancers; another evaluated an endoscope equipped with a minute camera that could be passed into the stomach; a third provided gonadatrophin assay reports to community physicians who could then make rapid, accurate identification of readily curable trophoblastic neoplasia in women; a fourth evaluated whether application of heat-quenched phosporous paint to the female breast and measurement of the ultraviolent light so radiated was a reliable index of neoplastic change. (48)

The contract mechanism available to the Program provided unusual flexibility. By fiscal year 1967, a wide-ranging, seemingly disparate group of contracts had been let. About $1.6 million was available. Here is a sampling:

- evaluation of rapid screening procedures for cervical cancer control. (The project was to determine the efficiency of rapid identification of obviously negative Pap cell studies. If the procedure were found to be specific and reliable, reproducibility studies could ensue, with a possible decline in the manpower need for cytotechnicians.)
- development of 20 or more closed-circuit television cancer education films for hospitals.
- demonstration and evaluation of the effects of cryogenic surgery on cervical cancer.
- promotion of the Health Hazard Appraisal Program through model physician and patient education activities.
- evaluation of thermography, 70 mm film mammography and sonography in early detection of breast cancer.
- estimation of the total lifetime radiation dose to be received by a woman who experiences periodic mammographic examinations.
- evaluation of the quality and reliability of the Papanicolaou smear as compared to the Davis Vaginal Irrigation Procedure.
- evaluation of electron spin resonance (ESR) diagnosis, type, and quantity of treatment agent; comparison of ESR activity in normal and cancer tissue.

support of numerous conferences, especially of paramedical, medical and dental personnel. (49)

Project grants in fiscal year 1967 were awarded to seven national agencies, almost entirely in various aspects of professional education and maintenance of professional standards. For example, $143,000 was awarded to the American Association of Blood Banks and $140,000 to the American College of Radiology to plan and administer radiation therapy treatment planning centers. In all, $550,000 was awarded in fiscal year 1967 for these purposes. (50)

A lion's share of those 1967 contract funds, $382,397, supported production of six 28-minute color films for television viewing. (51) Addressed to the general public, the theme was, "If I have cancer, I want to know." Ross was especially proud of the calibre of these films which were written, narrated, and performed by nationally recognized entertainment artists.

Particularly appealing to Dr. Ross himself was the idea of exploiting television in the United States. He was persuasive in mounting a plan to produce 10 such films. At least six were actually completed. Major authors with national reputations--Rod Serling, James Michener, Jacqueline Susann, Ossie Davis, Neil Simon, and Gerold Frank--were enlisted to write these films, which stressed entertainment. But each carried a subtle message designed to make the word cancer more acceptable in everyday conversation. The importance of early detection and other sound medical practices was emphasized.

For example, "Lucky Joe," the first completed film, had been shown 96 times on major television markets within the United States during its four months of distribution. (52) The second film, "Just Say the Word," was telecast in 65 outlets and a third, "Waiting Game," had been shown nationally 42 times prior to Ross reporting to the National Advisory Cancer Council in 1969 on the effectiveness of this enterprise. (53) "Waiting Game" won a silver medal at the 1969 independent film producing ceremony in New York City. (54) Ross concluded his report by indicating that all six finished films were expected to be distributed by the end of 1969 by a professional company, Sterling Movies of New York, which aimed to show each of the six films on 300 U.S. television stations. (55)

Another film, "Daddy Can't Find My Socks," was designed to encourage women to have an annual Papanicolaou test. It was distributed by HEW regional offices and was chosen for showing at the American Film Festival in New York. (56) "Prescription: Roses," depicting comprehensive medical care for the breast cancer patient, was designed for professional education. Ross reported in late 1969 that it had been shown to 130 medical audiences and had also won several awards. (57)

Some of Ross's critics question the wisdom of spending upwards of $400,000 to produce and distribute such films through television. (58) Was this a dubious activity for the federal Cancer Control Program to embark upon? Although not expressed by anyone on the staff of the American Cancer Society, for the federal government

to become involved in public media, which had been their domain, was highly competitive. Another opinion was that the information being generated was adequate and that, in fact, the impact was additive: the public was being treated to increasing amounts of public service television viewing on topics related to better cancer diagnosis and management.

Ross himself was proud of the film activity, as he was of developments in head and neck oncology, an area deemphasized by his predecessors. There was no evaluation made of this television film enterprise, however. It might have been desirable to do so from 1969 to 1972, when these films presumably were being screened. But there was no intact federal Cancer Control Program that could accomplish this type of evaluation, let alone perpetuate existing cancer control programs.

The Death Knell, June 30, 1970

Budget appropriations for a discrete federal Cancer Control Program plummetted, beginning in fiscal year 1968, when RMPS was beginning to take hold. Richard M. Nixon was elected President in November, 1968, and promoted a management-by-objectives approach to government. The newly established Office of Management and Budget (OMB) acquired enormous power. Health was an area under intense scrutiny, as Nixon fell heir to a catalogue of "new society" operating health programs which taxed federal revenues: Medicare, Medicaid, Regional Medical Programs, Comprehensive Health Planning, and others. To the OMB and enough members of Congress, the co-existence of a federal Cancer Control Program and cancer-related

activities supported by RMPS was perceived as redundant. No congressional appropriations for a federal Cancer Control Program were made for fiscal year 1971.

On June 30, 1970, the federal Cancer Control Program went out of existence. Curiously, it reached its zenith in funding and diffusion of programs in fiscal year 1967, just as Comprehensive Health Planning and Regional Medical Programs were coming into focus. These two "new society" programs, particularly RMPS, threatened the discrete categorical approach to control of cancer.

Cancer Control in the Regional Medical Programs*

The third agency, in which cancer control activities took place from 1965-70--but chiefly from 1970-76, was Regional Medical Programs.

Regional Medical Programs (RMPS), which extended from late 1965 to July, 1976, originally focused on control of the three major killers of Americans: heart disease, cancer, and stroke. RMPS was created through Public Law 89-239 (1965), the Congressional response to a two-year study conducted by the President's Commission on Heart Disease, Cancer and Stroke, chaired by the eminent heart surgeon Dr. Michael DeBakey. (60) The Commission enunciated these principles:

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* A detailed analysis of how Regional Medical Programs managed cancer control activities has been compiled by the Health Policy Analysis and Accountability Network, Inc., of Boise, Idaho, under a subcontract with the UCLA Cancer Control History Project; see Appendix 15. This section is a synopsis of the major historical facts and issues raised in that report, particularly as they affected (59) the federal Cancer Control Program. While this technical report concludes with passage of the National Cancer Act of 1971, the discussion covers the entire period, 1965-76, in which RMP functioned.

- The federal government should share responsibility for assuring that persons suffering from or threatened by heart disease, cancer and stroke have access to the fruits of scientific research.
- The federal government should assume major responsibility for strengthening and broadening research support which generates new knowledge for the control of these categorical diseases.
- Similarly, the federal government should assume major responsibility for direct and diversified support of medical education and other health manpower producing programs upon which control of these diseases depends.
- The rationale for these substantially increased expenditures is to save lives today and produce more life-saving knowledge for tomorrow. (61)

With respect to cancer, the Commission recommended that a national network of 25 Regional Cancer Centers be established, in which clinical investigation, teaching, and patient care would flourish in universities, hospitals, and research institutes. The Commission also proposed establishment of a national network of 150 regional diagnostic and treatment stations throughout the nation; a broad and flexible program of grant support to "stimulate the formation of medical complexes whereby university medical schools, hospitals and other health care and research agencies and institutions would work in concert;" and developmental grants to enable more medical schools to become "true 'centers of excellence'

in medical education and research." (62)

The commission recommended a program of incentive grants to stimulate community participation and the expansion of Public Health Service programs for community health research and coordinated laboratory facilities. Germane to cancer control the Commission recommended that a national program be established for the early detection of cervical cancer. Further, the Commission recommended 1) continuing education of health professionals and the public; 2) clinical fellowships (those in cancer were managed by the Cancer Control Program); 3) expansion of lifetime career research awards and paramedical training programs; 4) expansion of patient care facilities; 5) support for training health professionals; 6) research grant support to young investigators while in training; 7) improved data collection, educational resources and animal laboratory research. (63) The recommendations were relevant to functions in various elements of the Public Health Service, including the National Institutes of Health. They were management oriented and all-encompassing, taking cognizance of the potential inherent in the existing federal health establishment. Coordination, community involvement, and expansionism were stressed.

These penetrating recommendations were introduced as House Resolution 3140 (1965). The dissident views of the American Medical Association--that "the proposed legislation was jeopardizing AMA's attempt to work with the Secretary of DHEW relating to the Medicare law" (64)--were acknowledged. Twenty amendments to the bill were introduced after an August, 1965, conference

between AMA leaders, President Lyndon Johnson, and DHEW Secretary John Gardner. In the process, the regional cancer centers, long espoused by Commission members Dr. Sidney Farber and others, evaporated. (Regional cancer centers would be requested again in 1971, with success.) Instead, the concept of "regional cooperative arrangements" between existing health care institutions and agencies was introduced. PL89-239 emphasized peripheral institutions rather than the development of new or expanded categorically-focused institutions.

The law placed unusual emphasis on voluntary local initiative, rather than mandatory federal direction. (65) The grants authorized by the Act were to encourage and assist the establishment of cooperative arrangements among medical schools, research institutions, hospitals, health departments, and voluntary health agencies, explicitly to "close the gap" between knowledge development and its application with respect to the three target killer diseases. On October 6, 1965, President Johnson affixed his signature to PL 89-239. The impact on the established federal cancer control program and a number of well-developed state cancer control programs was swiftly felt.

RMPS survived for a decade. It was placed initially in the National Institutes of Health; moved in 1968 to the new Health Services and Mental Health Administration (HSMHA); and then in 1974, to one of the three units which superseded HSMHA: the Health Resources Administration, directed by former NCI Director Kenneth Endicott. Seven men directed RMPS during its stormy

federal existence. Although legislation to extend RMPS passed Congress in 1970, the Office of Management and Budget began impounding its funds less than a year later. The first threat of complete phase-out of RMPS came in 1973, but Congress voted to renew the RMP Act for an additional year; Nixon signed the measure rather than risk an override vote. Although Congress had appropriated $90 million for fiscal 1974, the Administration released only $17.1 million in September, 1973, to cover operations from July 1 - December 31, 1973. The National Association of Regional Medical Programs (NARMP), formed in that same month, filed suit against the Administration for release of over $100 million of impounded funds and relief from new program restrictions. On February 7, 1974, the court ordered the Administration to release $126 million of 1973 and 1974 RMPS funds, to lift the narrow program restrictions, and to pay the costs of the suit. In December, 1974, RMPS functions were integrated into yet another law--Public Law 92-641--enabling some operating RMPS activities to be sustained until July, 1976.

Deterrents

Two important factors impeded Regional Medical Programs from achieving its original objectives. First, the emphasis on control of three major chronic diseases--heart disease, cancer, and stroke--had dissipated by 1970, when non-categorical "health services delivery" became the federal priority for RMPS. Second

RMPS was caught in the larger federal health management crisis, in which the Office of the Surgeon General was devalued, the Public Health Service Commissioned Corps demoted, and numerous federal health activities shuffled about, regrouped and defunded. What happened to the federal Cancer Control Program was but a microcosm of the administrative manhandling RMPS was to experience.

In explaining the original move to RMPS to the National Advisory Cancer Council, federal Cancer Control Program Chief Dr. William Ross commented:

> ...[T]he Public Health Service is in such a state of flux, administratively, that it is almost impossible to describe our present position. It is even more difficult to predict where we and our projects will be a year from now. At the moment it appears that the name of our parent organization has been changed from the National Center for Chronic Disease Control to the Division of Chronic Disease Programs and that we have been transferred from the Bureau of Disease Prevention and Environmental Control Public Health Service, to the Regional Medical Programs Service, Health Services and Mental Health Administration...Requiescat in pace... (66)

It is alleged that Dr. Sidney Farber, one of the architects of the President's Commission report, was so disappointed at the minimal impact RMPS had on cancer control--especially since RMPS was not authorized to develop a national network of regional cancer centers--that by 1970, he encouraged Senator Ralph Yarborough (Dem.-Texas) to establish the Panel of Consultants on the Conquest of Cancer, which eventually led to passage of the 1971 National Cancer Act. (67) In that Act, regional comprehensive cancer centers were prominently stressed, as the President's Commission report had

originally recommended.

With respect to other Commission recommendations specifically addressed to cancer control, no new national cervical cancer detection program or community diagnostic and treatment centers were established. Cervical cancer detection projects, initiated in the early 1960s by the federal Cancer Control Program (CCP) reached an all-time high of 115 in 1969 and were evaluated by the federal CPP staff. (68) Many of the projects operated in "war on poverty" neighborhood health centers, Model Cities Programs, as well as in Planned Parenthood, nursing home and public health department clinics, emphasizing services to low-income women at highest risk. (69)

While administratively within RMPS, the federal Cancer Control Program attempted vainly to retain distinct identity and functions. The CCP staff reviewed cancer projects submitted by the individual Regions, and, on request, provided consultation and technical assistance to the Regions. Those few cancer control projects funded through the Comprehensive Health Planning Act of 1965 were also reviewed, but only if the PHS Regional Offices so requested. The Program managed to retain influence and authority for programs dispensing training grants that had been transferred to RMPS: senior clinical traineeships; training programs for cytotechnologists, radiation therapy-nuclear medicine technicians, medical technologists; and hospital clinical training in community hospitals. (70) Only 56 training projects were funded in fiscal year 1969, for a

total of $1.3 million. $2.7 million remained to be awarded, mainly for additional cytotechnology and senior clinical trainees after a September, 1968, decision to "bar new projects." (71)

Regional Medical Programs went in directions quite different from what the President's Commission had recommended. Aggregating chronic disease control programs and appending them to a new regional experiment was bound to damage both the new parent and the adoptive children. It was perhaps inevitable that the federal Cancer Control Program (and other traditional chronic disease programs) would be sacrificed. Had RMPS effectively sustained the existing cancer control activities set in motion during 1960-67, expanded upon them, and provided coherent federal direction to the Regions, the course might have been quite different. Not only did RMP and Comprehensive Health Planning undermine the existing base of activity, but relatively few alternative cancer control activities of any magnitude were initiated in their place.

First, the strategy of RMPS was different from that of the federal Cancer Control Program. The center of control was vested in the 56 Regions, not the federal vortex.

Second, on a regional and national basis, cancer competed with heart disease. Little as was done by RMPS in cancer control, even less was accomplished with programs to control stroke. The reigning interest was heart disease; the principal vehicle consisted of coronary care units, for which skilled personnel had to be trained.

Third, in very few of the 56 Regions, which generally followed state geographic boundaries, was there a deliberate effort to build on the accomplishments and relationships achieved by previous state cancer control programs.

Fourth, most (37) of the 56 regional grantee organizations were medical schools; in some states, the medical society was the grantee. State health agencies, which had the most experience in chronic disease control, were represented but did not play a leadership role in Regional Advisory Groups (RAGs]. RAGs were highly representative of the broad regional health establishment and, by law, had to include health service consumers as well as providers.

Regional Advisory Groups were also vested with local autonomy. They were to assess local categorical disease needs and develop project proposals consistent with locally perceived priorities. Unlike the long-standing relationship between the federal Cancer Control Program and state agencies and health institutions--whereby priorities were set by a national advisory committee and federal grant and contract funds were offered to support nationally perceived needs--a local RAG was expected to initiate ideas and cooperative arrangements and then submit a proposal for a project that might be unique to that region.

The federal RMPS cancer staff was expected only to provide guidance, to suggest opportunities, but not to limit them. (72) For example, if quality control of cancer care had been mandated (which it was not) through the RMP Act and each Region was required to install a nationally uniform tumor registry system, federal RMPS funds would have had to be earmarked for that purpose. But

RMPS was the antithesis of this concept. Not only did it depend on local initiative and cooperation, it negated cancer control activities already well established, evaluated, and known to be worthwhile. The RMPS cancer staff, therefore, attempted to promote the adoption of quality cancer care standards by underwriting criteria studies by the American College of Surgeons and American College of Radiology so that guidelines could be developed for voluntary compliance. The American College of Surgeons' study, (73) known familiarly as the "Cole Report" (for its chairman, Dr. Warren Cole), involved over 70 distinguised practitioners and took almost four years to compile. It was published in 1970, when cancer and other disease categorical approaches by RMPS were being challenged by the Nixon Administration. One of the final RMPS activities was the 1976 publication of A Planning Guide for Community Radiation Oncology Facilities (74), which would assist the National Cancer Program. The staff also promoted the voluntary adoption of a minimum tumor registry system in several regions where no population-based registry existed.

Earmarking of funds finally evolved after 1971--but regions had to submit proposals to receive them; many regions rejected the project concepts for which the funds were earmarked. The limited influence which national RMPS staff exerted on individual RAGs guaranteed the RMPS would not be characterized by undue federal control. But this organizational decision proved to be a weakness as well as a strength of RMPS, as RMP cancer staffer Dr. Margaret Sloan has said. (75)

Early in RMPS history, NCI Director Kenneth Endicott advised the National RMP Advisory Council that the National Cancer Institute would depend on RMPS to develop resources, to plan, and to assist in identifying regional cancer centers--an expectation of the President's Commission. (76) But what emerged as the cancer content of Regional Medical Programs fell far short of the objective.

What Price Cancer Control?

Between July 1, 1965, and June 30, 1976, more than $600 million was allocated to Regional Medical Programs. The best estimate is that $34.5 million (5.6 percent) was awarded to local regional RMPS projects whose main purpose was cancer control. (77) Based on a 1974 survey, the Public Accountability Group* estimated that $10.4 million had been awarded to cancer focused projects, $1.3 million to cancer control activities such as continuing professional education, and that $16 million in cost-sharing funds had been provided for RMPS cancer control projects by outside funding sources. (78) The peak year was fiscal 1969, when $7.3 million (10 percent of the total RMPS award that year) was awarded to cancer-related projects. This sum is over and above the $4.1 million administered separately by the federal Cancer Control Program, then still operative in Regional Medical Programs. (79)

During this 11-year period, a small number of cancer-related projects evolved. Some may be regarded as cancer control, although

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* Now Health Policy Analysis and Accountability Network, Inc.

there was no systematic definition of what aspect of cancer care they should influence.

Stimulated by the national RMPS cancer staff, several regions did strengthen hospital-based tumor registries. Several radiation therapy dosimetry planning centers were established, also by national staff influence, so that service could be provided, by telephone and computer linkage, to radiation therapy departments whose volume did not justify employment of a full-time physicist. "Circuit-riding" oncology specialist teams were developed in several regions to bring clinical diagnostic and treatment services to more remote areas and to foster close links to major academic medical centers. In Connecticut, scene of the nation's only statewide tumor registry (established in 1929), a voluntary consolidated radiation therapy referral system was developed, and connections between a number of community hospitals and the state's two medical schools were strengthened. With a small RMPS grant, the nucleus of the nation's first hospice was also established in New Haven. (See Book One, Chapter 8). Planning and feasibility studies supported by RMPS catalyzed the establishment of the Mountain States Tumor Institute to serve a sparcely populated region in several states. The Institute has endured, sustained by state appropriations, federal grants, and third-party reimbursement for actual patient care. Through a planning process underwritten by RMPS, the Fred Hutchinson Cancer Center in Seattle secured a $5 million NCI construction grant and was among the first centers designated as "comprehensive" under the 1971 National Cancer Act.

No one familiar with the history of cancer control could consider these developments substantial contributions to the national cancer control effort. However, the emphasis on local autonomy, while perhaps worthy ideologically, generated many activities which were short-term, could not be evaluated comparatively, could not be replicated in other settings, and could not be sustained without RMP support. During its entire 11 years of existence, RMPS budgeted specifically for cancer control only about 1.5 times as much as budgeted for cancer control during a single year of the original Cancer Control Program ($34 million vs. $21 million).

Why?

Why was cancer control given such short shrift through Regional Medical Programs? A number of reasons emerge.

- There was no commitment that RMPS develop cancer "control" activities. Prevention was scarcely alluded to and essentially no projects were funded that addressed this facet of control.
- Heart disease activities looked easier to devise, captured regional interest across the nation, and overwhelmed cancer-related planning and implementation.
- Most RMPS were dominated by medical schools, which lacked experience in genuine "outreach" or disease control activities. Few medical school cancer coordinators were active in Regional Advisory Groups or categorical disease planning committees; and few were accustomed to directing non-insti-

tutional cancer control activities.

- Local and state health departments, which had been among the promoters of cancer control, were rarely influential on Regional Advisory Groups, which, despite "representation," were dominated by medical school and medical society representatives.
- Many cancer-related projects failed to receive approval by regional technical review committees. Possibly, this reflected, in part, the preoccupation with projects that were directed at diagnostic and treatment points on the control spectrum, while neglecting prevention. Projects stressing diagnosis and treatment did not interfere with the domination of cancer care by specialists. At the same time, these projects satisfied consumer elements on Regional Advisory Groups--consumers who were unsophisticated about preventive aspects of any disease control pursuit.
- The involvement of the American Cancer Society at all levels of decision-making in RMPS was uneven; without ACS volunteers or state health department cancer control advocates, there were few spokesmen for cancer control.
- Little effort was made, except in Connecticut, to build on the foundations of state-federal cancer control relationships which had been in place since the 1950s; and, of course, in many regions, the degree of cancer control activity was sparce, despite annual subvention funds since 1947.

- The less threatening compromise of "cooperative arrangements" required by the RMP Act relieved organized medicine of its concern, the implementation of Medicare, and implications that these programs would hasten national health insurance. "Cooperative arrangements" proved to be poor substitutes for cancer centers would hasten national health insurance.
- Once RMPS priorities moved away from categorical chronic diseases in 1970, it was even harder to influence regions to develop cancer-related projects.
- The decision to encourage local initiative and cooperative arrangements sabotaged any substantive national cancer control scheme. The preoccupation with regional assessment and planning vitiated the concept that national standards, priorities, and demonstrations--the pattern extant since the 1930s--would result in improved services throughout the nation.
- Although a cancer related project might rank high within its own Regional Advisory Group without earmarking of funds specifically for cancer activities at the national RMPS level, there was no assurance such a project would be funded; the competition initially was with heart disease and stroke projects, and after 1970, with "health services delivery" projects, kidney disease, and others.
- There were no staunch cancer control advocates at the highest level of decision-making in RMPS; the national RMPS directors were consistently pro-research, pro-medical school, and generally unfamiliar with the Public Health Service approach to disease control.

Benefits of RMPS for Cancer Control

Although the federal Cancer Control Program was swallowed up in Regional Medical Programs, RMPS itself introduced some concepts which paved the way for the National Cancer Program. First, the community forums required by RMPS forged relationships between medical schools, public and voluntary health agencies, medical societies, hospitals, and health service consumers. For the first time, medical schools had a mandate to engage in outreach-control-activities, in partnership with other interested parties. Second, the very exercise of regionalization, even if fraught with difficulty, was undertaken. It was recognized that if the nation were to use its human and technological resources efficiently and democratically, regional approaches to specialized health services must be developed. The regional experience did pave the way for the comprehensive cancer center program and may have spawned greater confidence in a national health insurance plan that advocates regional management of federal insurance allocations (Kennedy-Corman proposal).

On balance, the Regional Medical Programs appears to have been a sound concept that might have accomplished far more in a period of national peace and harmony. The nation was engaged in a distant, costly war for much of the period, a war on whose value the nation was sharply divided. The war siphoned funds away from domestic concerns. Once it ended, the citizens discovered the highest office of the land to be corrupt. Although Mr. Nixon was discredited and left office in mid-1974, his successor Gerald Ford showed

little disposition to realign priorities for health.

Further, administrative convolutions in the national "health establishment" maimed even those first, promising opportunities. Relatively little cancer control was attempted for the $34.5 million invested by RMPS. Even less remains after 1976 as enduring evidence of the investment. The payoffs in cancer control are never quick. RMPS pursued the path of least resistance in fulfilling its own mandate; where local impetus was generated and technical review was supportive, some increments of cancer control were initiated.

The shortcomings of Regional Medical Programs, as perceived by Dr. Farber and others, fueled the fire for a new national cancer program. The 1971 National Cancer Act (see Book Two, Chapter 8) was ironically, an indirect consequence of the fiasco Regional Medical Programs became.

Reflections on the Period 1965-1970

The most positive feature of the federal Cancer Control Program was expansion of the site-specific activities identified during 1957-1965, particularly those aimed at early detection of the major cancer killers. There is no evidence that this expansion resulted from deliberate planning. Rather, it occurred, based on ongoing extramural advice, congressional targeted appropriations, and the diligence of Program staff. With congressional oversight, in fact, programs to train cytotechnicians and perform cytologic examinations multiplied rapidly. The federal Cancer Control Program was able to respond to congressional intent and disseminate well-established knowledge,

services, and manpower.

At the same time, with contract funds more available, the Program assumed a wider scope than in the past. Developmental research was encouraged; a variety of start-up projects, testing a variety of hypotheses and technologies, were funded.

The Program moved toward control of head and neck cancer, using techniques well tested for other sites: professional education and manpower development, information dissemination, and demonstration service projects.

Nonetheless, the Program was doomed almost as soon as Ross became Chief, for reasons primarily external to its own progress. The enactment of Regional Medical Programs and Comprehensive Health Planning, with inevitable redistribution of federal program monies to regions and states, was virtually outside the control of the Program. At the operational level, the Cancer Control Program suffered greatly from the constant reorganizations of the U.S. Public Health Service.

In many ways, it is remarkable that the Program accomplished as much as it did, given the administrative turmoil in the late 1960s. The preordained collapse of the Program could not be averted. Ross was sensitive to the need for a constituency, perhaps more so than his predecessors. But he had little time to build one. The Public Health Cancer Association was too small in 1965 to serve that function. In a brash move, Ross attempted to vastly increase nationwide membership in that organization, but the effort failed, Ross was criticized for the methods he used, and the Program was defunded without vigorous reaction.

The outside critic, reviewing the diffusion of program activity at least with respect to contracts, would say the Program lacked sharply delineated objectives and goals. (Echoes of that observation have been heard since 1971, when cancer control was reinvigorated in the National Cancer Institute.) Looking back over the entire period, 1937-1970, the federal Cancer Control Program was most effective when it:

- was focused, concentrated;
- addressed primary medical practitioners and public health workers;
- concentrated on early detection of site-specific cancers and the means to intervene at this point on the spectrum;
- engaged in developmental research selectively, using less than 10 percent of total annual appropriations;
- worked positively with voluntary health agencies such as the American Cancer Society and professional bodies such as the American College of Surgeons, with clear understanding of each other's roles in the totality of cancer control management;
- did not substitute the search for "short-term" payoffs for more ponderous, enduring, and costly investment in long-term strategies through professional and public education, manpower training, and quality control measure.

Few cancer control activitists or professional leaders emerged from the federal Cancer Control Program. Just as too little was done

to cultivate a constituency able to challenge the burgeoning biomedical establishment in appropriations hearings, too few program administrators were readied for assignment in the states--where the front line of cancer control operated and continuity and resourcefulness were essential.

None of the several federal cancer control programs paid much heed to primary prevention or to rehabilitation. In this, program direction followed the line of least resistance. There was no obvious attempt to challenge industry or organized medicine. Industry was virtually ignored; let NCI scientists and field studies personnel take on that role. Organized medicine was catered to, in the main, but major gains were made in upgrading professional standards and education, and ultimately in training paraprofessionals to assume tasks previously controlled by private practicing physicians. The techniques were persuasive, offering funds and opportunities, not imposing. The end-result, slow in realization, was that some current cancer control concepts became engrained in the individual practices of primary medical physicians.

Regional Medical Programs aimed to do some of the same things that the federal Cancer Control Program had been charged with in 1937. With large budgets, the concept of local priority-setting, competition with coronary care projects, direct involvement of community medical practitioners, and, generally, domination of medical school philosophy, the federal Cancer Control Program appeared duplicative, sluggish, and modest by comparison.

Only after it was thoroughly eliminated in July, 1970, could one see that RMP in no way took over the functions of the federal Cancer Control Program. Fortuitously, the National Panel of Consultants on the Conquest of Cancer began its intensive study into the broad "state of the art" of cancer control in June, 1970. As revealed in the next chapter, the fiscal and programmatic death of the federal Cancer Control Program was noticed. Out of that collapse, a new phoenix rose.

(1) U.S. President's Commission on Heart Diseases, Cancer and Stroke. A National Program to Conquer Heart Disease, Cancer and Stroke, II. Washington, D.C., U.S. Govt. Printing Office, 1964.

(2) Log of Dr. Lewis Robbins, June 9, 1965.

(3) See note (2).

(4) See note (2).

(5) See note (2).

(6) Annual Report of the Surgeon General, 1969. U.S. Public Health Service, Washington, D.C., U.S. Govt. Printing Office, 1970, at 30.

(7) U.S. Congress. Senate. National Program for the Conquest of Cancer. Report of the National Panel of Consultants on the Conquest of Cancer, Authorized by Senate Res. 376. Prepared for the Committee on Labor and Public Welfare, U.S. Senate. 92nd Congress - 1st session. Doc. 92-9. Washington, D.C., U.S. Govt. Printing Office, 1971.

(8) See note (6) at 157.

(9) Annual Report of the Surgeon General, 1968. U.S. Public Health Service, Washington, D.C., U.S. Govt. Printing Office, 1969, at 5.

(10) See note (7) at 220.

(11) National Cancer Institute, Research Information Branch. Research and Related Programs of the National Cancer Institute. USDHEW, PHS, NIH, National Cancer Institute. PHS Pub. #458-A, revised 1966. Washington, D.C., U.S. Govt. Printing Office, 1967, at 17.

(12) See note (11).

(13) Dr. William Ross. Cancer Control Activities. Report to the National Advisory Cancer Council. November, 1969. (mimeo)

(14) Dr. William Ross. Cancer Control Branch Activities. Report to the National Advisory Cancer Council. November, 1966. (mimeo)

(15) See note (14).

(16) See note (14).

(17) See note (14).

(18) See note (13).

(19) See note (13).

(20) See note (13).

(21) Interview with Dr. William Ross, former Chief, Cancer Control Branch, Bureau of State Services, by Devra Breslow of HCCP, May 20, 1976, Washington, D.C.

(22) See note (21).

(23) Dr. William Ross. Cancer Control Program Activities. Report to the National Advisory Cancer Council. November, 1968. (mimeo)

(24) See note (23).

(25) See note (23).

(26) See note (23).

(27) See note (14).

(28) See note (14).

(29) See note (14).

(30) See note (7) at 230.

(31) See note (23).

(32) See note (23).

(33) See note (13).

(34) See note (14).

(35) See note (23).

(36) See note (23).

(37) See note (13).

(38) See note (14).

(39) See note (14).

(40) See note (14).

(41) Medak, H., et al. Atlas of Oral Cytology. Washington, D.C., U.S. Govt. Printing Office, 1970.

(42) See note (7) at 229.

(43) See note (13).

(44) See note (7) at 229.

(45) See note (13).

(46) See note (14).

(47) See note (14).

(48) See note (14), especially pp. 9-10.

(49) See note (23).

(50) See note (23).

(51) See note (23).

(52) See note (13).

(53) See note (13).

(54) See note (13).

(55) See note (13).

(56) See note (13).

(57) See note (13).

(58) Interview with Dr. Lewis Robbins, former Chief, Cancer Control Branch, Bureau of State Services, by Lester and Devra Breslow, November 20, 1975, Indianapolis, Ind.

(59) Popma, A., Selby, J., Smith, C.E.: An Overview of Cancer Control Programs in the Regional Medical Programs. Boise, Idaho, Health Policy Analysis and Accountability Network, Inc., December 31, 1976. (unpublished)

(60) See note (1).

(61) See note (1).

(62) See note (1).

(63) See note (1).

(64) Congressional Record at 120. December 13, 1964.

(65) Marston, R.Q., Schmidt, A.M.: Regional Medical Programs: a progress report. Am. J. Pub. Health 58:726-730, 1968.

(66) See note (23).

(67) Interview with Mr. Paul Christopher, Executive Director of American Cancer Society, Massachusetts Division, by Devra Breslow of HCCP, June 15, 1976, Boston, Mass.

(68) See note (13).

(69) See note (13).

(70) See note (13).

(71) See note (7) at 229.

(72) See note (59) at 14-15.

(73) Committee on Guidelines for Cancer Care, Commission on Cancer, American College of Surgeons. Guidelines for Cancer Care: Organization, Personnel, Facilities. Chicago, American College of Surgeons, 1970.

(74) Parker, R.G. (ed.): A Planning Guide for Community Radiation Oncology Facilities. Chevy Chase, Md., Committee on Cancer Management of the American College of Radiology, 1976.

(75) Interview with Dr. Margaret Sloan, former Cancer Staff, Regional Medical Programs, current Special Assistant for Liaison, National Cancer Institute, by C. E. Smith of HPAAN, Inc., December, 1976, Bethesda, Md.

(76) U.S. Dept. of HEW, Division of Regional Medical Programs. National Advisory Council. Minutes. December 21, 1965.

(77) See note (59) at 36.

(78) See note (59) at 37.

(79) See note (59) at 37.

CHAPTER 8

PRELUDE TO THE NATIONAL CANCER ACT OF 1971: 1970-71

On April 27, 1970, the U.S. Senate passed Senate Resolution 376 which authorized the Senate Committee on Labor and Public Welfare, with "the advice of an advisory committee, to report to the Senate on (1) the present status of scientific knowledge with respect to the causes of cancer and its treatment, cure, and elimination, (2) the prospect of success in such endeavors, and (3) measures necessary or desirable to facilitate success at the earliest possible time." (1) Acting upon this resolution, the National Panel of Consultants on the Conquest of Cancer was appointed in June, 1970, and their report, issued in late 1970, set in motion a new mission to attack cancer.

Several men were associated with this renewed federal effort. Foremost was Senator Ralph W. Yarborough (Dem.-Texas), Chairman of the Senate Committee on Labor and Public Health and Senate spokesman for health following the demise of Senator Lister Hill. Senator Edward Kennedy (Dem.-Mass.) sustained the initiative when Yarborough lost his Senate seat by introducing S. 34 in 1971.

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President Richard M. Nixon wanted to be identified with whatever cancer legislation emerged; S. 1828 was introduced to carry the Administration's views. Congressman Paul Rogers (Dem.-Fla.) carried the measure into the House of Representatives and achieved the critical compromises, without which the measure might have gone the way of Matt Neely's crusades in the late 1920s and mid-1940s. The fifth figure in the drama was a New York investment company executive, Mr. Benno C. Schmidt, who chaired the "Yarborough Panel of Consultants" and who became the first chairman of the President's Cancer Advisory Panel established as a consequence of the legislation enacted late in 1971. Mr. Schmidt, a Republican friend of Senator Jacob Javits (Rep.-N.Y.) who cosponsored S. 34, was also a "legal" circle friend of Senator Yarborough, a fellow Texan, and earned his "cancer-aware" credentials by service on the Board of the Memorial Sloan-Kettering Foundation. For insuring that cancer control was included in the Act which finally passed the House of Representatives, Dr. Ernst Wynder, then just mobilizing the American Health Foundation, and Dr. William Ross, steward of the federal cancer control program, deserve credit.

Yarborough's Lead

It was Senator Yarborough who set the idea of conquest in motion again, an idea whose time apparently had come in 1970, as NASA successfully dispatched a man to the moon and back, polio had been conquered, the Vietnamese war conceivably would wind down, and renewed federal attention to domestic issues was feasible.

First elected to the Senate in 1957, Yarborough had selected the Health Subcommittee of the Labor and Public Welfare Committee because "Texas was fortieth in the United States in health services." (2) He became a protege of Senator Lister Hill, supported all health bills, including appropriation measures which enlarged the National Institutes of Health. In the early 1960s, Dr. R. Lee Clark testified before the Health Subcommittee regarding funds for cancer research. Yarborough respected Clark--he knew his family well. Clark's uncle had been the inspiring history professor who influenced Yarborough to become a lawyer and eventually a United States Senator. The Clark family was highly respected in Texas; most of them were educators or highly educated in other fields, and Randolph Lee Clark was no exception. As director of the M. D. Anderson Hospital and Tumor Institute in Houston, he was building in Texas a cancer research and clinical center of international repute. So it was that Yarborough could trust Clark not to make a wild estimate of what it would take to have a genuine breakthrough in cancer. Yarborough also had a personal interest: several of his family members by then had succumbed to cancer; others would do so in the ensuing decade.

"It would take one billion dollars a year for ten years," Clark told the Senate Health Subcommittee, "to find the answers for perhaps 90 percent of human cancers." (3) But Clark cautioned--in the early 1960s--"We can't use that kind of money now. We lack the facilities and the scientists to mount that level of attack." (4)

The idea lay dormant for nearly a decade. No one else on the Senate Health Subcommittee was committed to that type of investment, including the chairman, Lister Hill.

On January 1, 1969, Yarborough succeeded Hill as Chairman of the Senate Health Subcommittee. He was the leader now. All of this time, "I was hoping to do something about cancer." (5, "My personal desire was to press forward with a giant project similar to that under which the atomic bomb had been developed in World War II, or the man placed on the moon in the NASA project, to funnel money into a massive effort to find a cure for cancer and also be uncovering the cause at the same time." (6)

The solution was an intense six-month study of the status of cancer control in the broadest sense in the nation; the study cost $75,000 of the $250,000 appropriated; the report, based on testimony and staff research, was delivered to the Senate on November 27, 1970.

Yarborough's own personal influence was reflected nonetheless in both the composition of the consultant panel and the major thesis which emerged from its study: that the way to conquer cancer was a separate authority outside of the National Institutes of Health, a fresh authority that would not threaten the prerogatives of existing institutions but would give vitality, direction, and priority to controlling cancer--just as NASA had done with its 1969 moonshot.

Among the 13 scientists appointed to the Panel were Dr. R. Lee Clark, Dr. Joseph Burchenal of Memorial Sloan-Kettering, Dr. James

Holland, also a prominent New York State oncologic scientist, Dr. Henry Kaplan, Nobel laureate Dr. Joshua Lederberg of Stanford University, and several others prominent in national cancer affairs, including NCI study sections and councils and the Board of the American Cancer Society. The laymen were also hand-picked, and the influence of Mrs. Mary Lasker was obvious: New Yorkers Elmer Bobst, Emerson Foote, Anna Rosenberg Hoffman, New York advertising executive Mary Wells Lawrence, and Laurence Rockefeller were among the 13 laymen. The scientific cochairman was Dr. Sidney Farber, again a person in whom both Mrs. Lasker and Mr. Yarborough had utmost confidence. Selected as chairman was Mr. Benno Schmidt, whom Yarborough wanted because "I knew he was a driver." (7) Schmidt's financial connections with the Rockefellers, not Sloan-Kettering affiliation, Yarborough claimed, were the cardinal qualities he sought. (8)

Yarborough's original goal was to recommend a strategy that would "find the cause and the cure for cancer." (9) Most of the scientific panelists and business leaders on the Panel ignored his interest in "finding the cause." They wanted to know, as they asked many witnesses who testified before them, "when are we going to get the cure?" (10) Rather than sacrifice the entire endeavor, Yarborough dropped his own priority to "find the cause. I was in the Army. I know. When you're stalled on one front, you have to move on to another." (11)

The Panel Report

The distinguished panel of 26 consultants (half scientists and physicians knowledgable about cancer research and directives, half laymen) worked prodigiously through the summer and early fall of 1970. Their efforts were boosted by a second resolution, Concurrent Resolution 675, passed on July 15th in the House and subsequently by the Senate, which expressed "the unanimous sense of the Congress that the conquest of cancer is a national crusade" and "that Congress should appropriate the necessary funds" to deliver the citizenry from "the greatest medical scourge in history." (12)

The Panel, in its deliberations, summary and recommendations, acknowledged sensitivity to the issue of "cancer control" as defined in this history. But the overwhelming concern of the Panel was how to establish administratively a national program to conquer cancer. In light of competing national domestic and foreign commitments, just how could the conquest of cancer receive its just attention? The Panel did identify "areas of special promise which must be aggressively pursued." Among them, pertinent to cancer control, were these:

- identification and study of the chemical, physical, and other environmental factors that cause cancer
- epidemiology of cancer
- cancer prevention (13)

The Panel's survey of the "state of the art," the relative decline in the budget of the National Cancer Institute--"...Federal

support for cancer research has leveled off since 1967, and that, due to inflation, the actual amount of work done has decreased..." (14) --led to a proposal that $400 million should be appropriated in 1972, "reaching a level of $800 million to $1 billion in 1976." (15)

The principal focus, however, was an administrative arrangement to insure activation of a conspicuous coherent program.

> The effective implementation of such a program will require a simplification of organizational arrangements and a drastic reduction in the number of people involved in administrative decisions. This type of straight-line organizational efficiency does not exist today in the National Cancer Institute, the National Institutes of Health, or the Department of Health, Education, and Welfare. (16)

The Panel expressed "real doubt" that the organization required to conquer cancer currently existed or whether it was even wise for the Secretary of HEW to attempt to "give cancer the priority necessary to carry out the congressional mandate in a department charged with multiple health and other responsibilities of that Department." (17)

Citing examples from the past when a targetted mission was sought (e.g., atomic bomb, moonshot, conquest of polio), the panel recommended the establishment of a National Cancer Authority.

> All the functions, personnel, facilities, appropriations, programs, and authorities of the National Cancer Institute should be transferred to the National Cancer Authority. The Authority should be headed by an Administrator appointed by the President with the advice and consent of the Senate, and he

should report directly to the President and present his budgets and programs to the Congress. (18)

For the next 12 months, then, then the most heated debate of the revived"conquest of cancer" pursuit pertained to these issues:

- the independence of a National Cancer Authority
- whether the National Cancer Institute should remain in NIH or become the nucleus of the new autonomous authority
- the line authority from the U.S. President directly to the Authority Administrator

The research of the new program thrust was implicit. Until practically the final hour of legislative action, cancer control was ignored or obscured. The central debate was authority.

The recommendations of the Panel were embodied in S. 4564, introduced by Senator Yarborough on December 4, 1970. It was the final momentous piece of health legislation with which Yarborough would be associated, for, as with his predecessor Matt Neely (of 1928 and 1944 cancer conquest measures), he had been defeated for reelection, in the May, 1970, Texas primary.

Yarborough's proposed Conquest of Cancer Act called for the establishment of the National Cancer Authority, a Presidentially-appointed Administrator, the transfer of all NCI resources and National Advisory Cancer Council functions to the National Cancer Authority. The National Cancer Institute and the National Advisory Cancer Council would "lapse." (19)

The only function of the proposed Act which faintly suggested a minimal cancer control effort was item (5):

to collect, analyze, and disseminate all data useful in the prevention, diagnosis, and treatment of cancer for professionals and for the general public. (20)

The Kennedy-Javits Proposal

The identical language, in fact the entire Act as proposed by Yarborough, was preserved in a second Senate Bill: Senate Bill 34 of the 92nd Congress was introduced by Edward Kennedy on January 25, 1971. Senator Jacob Javits cosponsored S. 34. Nowhere in either of these Senate bills, or in S. 1828, introduced on May 11th for the Administration by Senator Peter Dominick (R.-Col.), was there a hint that a requisite function of the new National Cancer Program would be to apply the fruitful findings of cancer research to thwart the disease.

Within less than one year, in a sequence of public hearings and private negotiations, the issues of authority and independence were heatedly debated. Republican President Richard Nixon and Democrat Senator Edward Kennedy became strange bedfellows in this new initiative to conquer cancer. Congressman Paul Rogers and his House committee adroitly salvaged the proposal from possible doom by resolving the central thorny issue--the question of agency independence. Moreover, as a result of curious developments late in the legislative process, Rogers was instrumental in restoring to the National Cancer Program a requirement to conduct cancer control activities.

The Subcommittee on Health of the Senate Committee on Labor and Public Welfare held hearings on S. 34 on March 9 and 10 and

June 10, 1971. The principal antagonists to creation of a NASA-like authority for cancer, outside of the National Institutes of Health, were Administration spokesmen: Special Assistant Dr. Roger Egeberg, Surgeon-General Dr. Jesse Steinfeld, NIH Director Dr. Robert Marston, and NCI Director Dr. Carl Baker. Kennedy told Marston and Baker in particular that the NCI and NIH were simply moving too slowly in management areas. (21) Marston claimed that if the NASA approach had been attempted 10 years previously with cancer, the funds would have gone to the wrong places. "We should be very cautious...not to overpromise, particularly for desperate people who are looking for quick answers." (22) But support for a separate authority was expressed by the Association of American Medical Colleges, the Federation of American Societies of Experimental Biology, the American College of Physicians, and the American Medical Association, for reasons that are not clear.

The tug-of-war between Kennedy and the NCI-NIH Directors deepened. The old order resisted change. "I think we can understand that Congress ought to have the opportunity to set priorities," Kennedy remonstrated. "Obviously it is a balance between having a complete respect for a biomedical researcher and his various interests and achieving what the taxpayer's money is meant to do." (23)

Administration spokesmen were supported in their antagonism toward an independent cancer authority vigorous statement read into the record by former HEW Assistant Secretary Dr. Philip Lee. It was contained in a letter to Dr. L. H. Smith, Jr., University of

California — San Francisco Medical Center medical administrator, from Dr. James Shannon, generally regarded as the man who "built" the National Institutes of Health. Shannon thought the proposal to operate a cancer authority outside of NIH "without merit and dangerously destructive." (24)

> The NIH...is an invaluable and irreplaceable guarantor to the nation that order, stability, sound judgment, balance, flexibility, responsiveness and responsibility will characterize the country's assault on the problems of disease, disability, and death....
>
> To look at any isolated fragment, no matter how large, apart from its innumerable major and minor connections...would be at best naive and at worst self-defeating. (25)

Dr. Shannon predicted that the removal of the NCI from the National Institutes of Health would "unleash forces of a divisive character which would quickly destroy the integrity of NIH... orderly governance would be replaced by anarchy...program emphasis would be entirely determined by uncritical zealots..." (26)

Mr. Schmidt, speaking for the Yarborough Panelists, reiterated the need for independent management--not independent scientific activity.

The only reference to cancer control throughout the entire Senate debate on S. 34 was a statement by Dr. Campbell Moses, Medical Director of the American Heart Association, who deplored "the dangerous cutbacks in categorical support for disease control programs in state health departments, the abolition of the chronic disease program of the Public Health Service," and cutbacks in Regional Medical Programs. (27)

The Administration's Proposal

During the spring of 1971, the Nixon Administration continued carefully to assess the situation. Administration insiders recognized that the cancer issue commanded immense public appeal. They concluded that the credit for success, if the cancer conquest bill achieved enactment, should not go to Senator Kennedy--a potential Presidential challenger in 1972. Accordingly, the Nixon Administration advanced S. 1828. In April, 1971, Nixon announced publicly that he was going to introduce a bill similar in concepts and principles to S. 34, establishing a "conquer cancer" program.

Public interest had already been sparked. Prompted by Mrs. Mary Lasker, columnist Ann Landers asked her readers to become "part of the mightiest offensive against a single disease in the history of our country." To do so, one need only write to one's senator. "If enough citizens let their Senators know they want S. 34 passed, it will pass." (28) The citizens responded. Millions of letters poured into senatorial offices. Nearly all favored S. 34, known then by its bipartisan sponsors, Kennedy and Republican Senator Jacob Javits. Those few dissenters who argued against the dissolution of the National Institutes of Health by establishing a separate National Cancer Authority of which the National Cancer Institute would be the research vortex, were scientists.

The "mark-up" session for S. 34 was slated for May 11th. At this session, the staff report was presented to the Executive Committee of the Subcommittee, outlining issues of concurrence and disagreement expressed in the previous hearings. By this time,

only one Subcommittee member dissented from the position of a separate independent cancer authority as recommended by the Yarborough Panelists: Senator Gaylord Nelson. He defended the NIH hard-line approach that cancer research should not be isolated from other biomedical research. The Executive Committee voted for a separate cancer authority. Senator Peter Dominick came into the meeting room from the Senate floor, where he had just introduced S. 1828. He asked the Executive Committee to consider the Administration measure. Lee Goldman, Staff Director of the Senate Subcommittee on Health at that time, recalled Senator Kennedy as saying: "Polarity is to be avoided." Thus, another hearing was scheduled for June 10th, at which both S. 34 and S. 1828 were to be considered. (29)

On May 12th, the day after S. 1828 had been introduced by Senator Dominick, Lee Goldman and the Subcommittee staff examined it in detail. They discerned that S. 1828 did not reflect President Nixon's statement of alliance with the Kennedy-Javits measure S. 34, but rather was closer to the position espoused by the scientific community restive at the possible dissolution of the National Institutes of Health. S. 1828 called for the national cancer authority to remain within the National Institutes of Health, and for the Director of the "cancer cure program" to have a rank equivalent to that of Assistant Secretary for Health and Scientific Affairs, HEW, or the Director of NIH. He would be a presidential appointee, as would 10 of the advisory committee members, among them the chairman. The National Advisory Cancer

Council would be retained as the ex officio working arm of the new "cancer cure" advisory committee.

The decision was made by Kennedy and the Subcommittee to move forward on the measure--but with what provisions? No one wanted a confrontation with Mr. Nixon, least of all Mr. Schmidt, a Nixon supporter. Hence, the determination was that the bill advanced must reflect what Nixon had said about endorsing the principles of S. 34, not what appeared in S. 1828. White House approval for this change was secured. Kennedy and Schmidt conferred and agreed that political warfare would not take place. The original substance of S. 34 was embodied in S. 1828 when it was heard on June 10th.

Kennedy made two unusual determinations: first, he chose to report out S. 1828, not S. 34 which he had authored, a remarkable concession; second, Kennedy asked Senator Dominick, the original sponsor of the bill, to report S. 1828 out to the full Senate, once it passed the Subcommittee and full Committee on June 16th. (30) The floor debate on July 7, 1971, lasted but two hours. S. 1828, Kennedy's bill, cloaked in the Administration's bill, passed the Senate 79-1. The lone dissenter was Senator Gaylord Nelson. He had introduced a bipartisan amendment to S. 34 on May 21st setting up the NIH as an independent government agency, with the National Cancer Authority within, and who, at the June 10th hearing had said: "Let's face it, all the publications are saying that there has been an agreement and that S. 34 and the President's proposal have been put together and that is the political reality." (31)

Nelson was correct. It was the political reality. But "cancer control, if treated at all" Mr. Goldman recalled, "was an afterthought." (32)

The House Proposals

Cancer control was not alluded to in the Senate version of what became the National Cancer Act of 1971. And until the very end of House debate--when the whole issue of a "cancer cure" program nearly collapsed--there were no references that application of relevant research findings or preventive measures be included in the House versions of the bill. Nearly 50 individual House resolutions were introduced on the "cancer cure" program, most of them identical to S. 1828 which passed the Senate. In the House hearings, held on 11 days from September 15 through October 11, 1971, the issues of agency automony, line authority to the President, and budgetary flexibility continued to be the central items of debate.

Congressman Paul Rogers who chaired the Subcommittee on Public Health and Environment (Committee on Interstate and Foreign Commerce) was the only person who even alluded to cancer control in the hearings. Obviously informed that the federal cancer control programs had been phased out in 1970, in part absorbed by Regional Medical Programs, he needled NIH Director Marston and HEW Secretary Richardson about their demise:

> I would like for you to go down those programs and tell me how much money is now being given by the National Institute of Cancer to maintain those control programs.... And here it is, where we have the answer to solve some cancer problems, and we talk about mounting a drive...and I think it is probably OMB [Office of Management and Budget] too, has cut out many of the programs that could actually save lives right now with present knowledge, isn't this true? Don't we have present knowledge with early detection in many of these areas...? (33)

Rogers summed up his own views by saying: "...[I]t doesn't do much good to talk about research if we are not going to apply it and save lives in America , and that is what this committee is concerned with..." (34)

It was a brief public moment for cancer control, but it was swallowed up again by the larger debate: whether a separate authority should be created outside of the National Institutes of Health. That fundamental issue was finally resolved through a House-generated compromise and a partial repudiation of the Nixon-Kennedy proposal: A National Cancer Program would be established with a Director reporting to the President; the program would reside in the National Cancer Institute, which would remain within the National Institutes of Health; the National Advisory Cancer Council would be replaced by a National Advisory Cancer Board of at least one third laymen; and a three-person panel--The President's Cancer Panel--would be established, as liaison between the President and the Program Director. The Panel would be composed of one individual representing management and two, science and medicine.

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The final discussions in House-Senate conference sessions would either make or kill the bill for another year. It is to the credit of Senator Kennedy and his forces that he yielded on issues relating to autonomy so that the House version of the bill would generally survive and that, for whatever political mileage it was worth, Congressman Paul Rogers would receive public plaudits. Rogers summarized the delicate compromises of the conference:

> ...this report represents a substantial victory for the House...the biomedical community and the American people. It insures a national attack on cancer--...through building on the strengths of the National Cancer Institute within the National Institutes of Health...
>
> almost all of the features of the House bill were retained by the conferees.
>
> ...besides providing for a stepped-up research effort...the conference report provides for the following significant improvements in existing procedures, all of which were contained in the House version:
>
> The three-man panel created by the House to oversee the functions of the National Cancer Institute was retained intact....
>
> Clinical research centers...will be increased by 15 and will be eligible for block grants... up to $5 million per center [per year].
>
> Cancer control programs...will be reactivated and placed under control of NCI. Funds... over a 3-year period are $90 million.
>
> This includes Pap tests for cervical cancer, breast checks, and oral examinations, and the training for personnel in cancer. The gathering of cancer statistics will also be included..." (35)

Cancer Control Reinstated

In the final House bill, and preserved through conference with the Senate, a new paragraph appeared which stipulated that: "The Director of the National Cancer Institute shall establish programs as necessary for cooperation with State and other health agencies in the diagnosis, prevention and treatment of cancer." (36)

How did this brief paragraph which proscribes cancer control as a National Cancer Program responsibility come to be included in the House bill which ultimately passed? In the opinion of Rogers' staff who worked with him on the bill, that innocent paragraph restoring cancer control mandate to the NCI was a pure "Rogers special." (37)

Robert Maher, a member of Congressman Rogers' congressional staff, recalled trying to gather information about the history of cancer activities at the federal level.

> I found a fellow, whose name I can't remember now [Dr. William Ross or Mr. William Melton], who had been working in the old Cancer Control Program. I talked to him about what they intended to do or where they were. They had started mammography demonstration programs... the refinement of X-ray techniques.
>
> I fully realized the philosophical or professional dichotomy between the basic scientists and researchers about what they considered to be 'mechanical' work.
>
> On the other hand, it was felt that if we're going to bring this [sic] much financial rerources together, what is the most immediate payoff? That's early detection. And a prevention program...I thought that if the American public can cough up this much money, cancer control was a legitimate thing to do. (38)

Maher accompanied Congressman Rogers to a dinner at the Watergate Hotel organized by Dr. Ernst Wynder, President of the American Health Foundation. NCI Director Carl Baker and Virus Division Chief, Frank J. Rauscher, were present. The precise date is not known, but Maher knows that the dinner was held prior to November 15th, when all amendments were incorporated in the House version of the Cancer Attack Act which passed the House on that date. Dr. Wynder doesn't recall the date,

but the subject was cancer control. "We talked about what was necessary. We got into the 'control' program.... Most of them didn't care much for it. I asked, 'What are you going to give people in the next five years?'.... They were not sold, of course," Maher said.

> There was another feeling. They said, 'you know, you can set up cancer control at Health Services or some place. Let them do it.' But, I thought, if you have a program for space medicine that was separate from your actual space program, it's not going to get the same attention.... You can take the same funds, but if they are not under the golden flag, they're just not going to be treated the same. I think Mr. Rogers became convinced that, indeed, cancer control was a good investment...so we put it in. (39)

James Menger, Staff Director of the Rogers' Subcommittee in 1971, had, five years later, "only a dim recollection of getting the NCI into operating [control] programs." (40) (Menger can be forgiven for loss of detail, his memory no doubt clouded by hundreds of bills and amendments he helped to draft and shepherd through the Subcommittee over 10 years.) But, he acknowledged, if the amendment

mandating the NCI to engage in control activities was in the final bill, he would only have drafted such a paragraph under the express instructions of the Subcommittee meeting in Executive Session. The majority of amendments that were added, he recalled, were initiated by Congressman Rogers himself. (41)

The precise wordsmiths may never be known for a certainty, but their spokesman was indisputably Congressman Paul Rogers. He has admitted with pride that he did promote insertion of the cancer control authorization paragraph as one amendment before the House bill emerged as a "clean" bill, ready for Senate vote. (42) And he ably defended the measure in whatever discussions ensued in the Senate-House conference sessions on December 1, 2, and 9, 1971.

The National Cancer Act of 1971

On December 23, 1971, President Richard M. Nixon signed into law the National Cancer Act of 1971. One paragraph, implanted without debate, its import virtually ignored in the Senate and barely alluded to in the House hearings, reinstated cancer control as a vital component of a recharged multifaceted attack on cancer. The Act contained specific authorization for cancer control, under Section 409(b): $20 million in fiscal year 1972, $30 million for fiscal year 1973, and $40 million for fiscal year 1974.

The language was loose: "to establish programs as necessary for cooperation with State and other health agencies," compared to the precise control functions--radium loan, fellowships, traineeships, research--authorized by the 1937 National Cancer Institute Act.

But it was all the language needed to reestablish federal responsibility, with a sizeable budget.

Cancer control was returned to its parent National Cancer Institute more dead than alive, less understood or tolerated than ever before, an unwelcomed "black sheep" seeking credibility in a biomedical research dominated Institute flush with new optimism, power and riches.

Epilogue

Even before the National Cancer Institute Act of 1971 passed the House of Representatives and was signed into law, the National Cancer Institute responded to the Administration's congressional testimony that an overall plan was needed. "Two hundred and fifty laboratory and clinical scientists, representing a broad spectrum of biomedical and clinical disciplines, met in a series of 40 planning sessions and two major review sessions between October, 1971, and March, 1972, to develop a scientific and operational foundation for a National Cancer Program." (43) a program assured by stature by the Act itself. The plan which emerged in a series of documents (44, 45) immersed cancer control activities into the total scheme. One idea advanced by the eight task forces of national scientists and oncologists which did not come into fruition was establishment of a separate Division of Cancer Detection. (46) Many of the other concepts scattered throughout this first round of

total program planning suggested opportunities for cancer control activities, but there was not a specific recommendation to establish a Division of Cancer Cause and Presention; Cancer Biology and Diagnosis; Cancer Treatment; and Research, Resources and Centers.

Dr. Carl Baker, Director of the National Cancer Institute at the time the National Cancer Act of 1971 was enacted, was himself philosophically against restoring cancer control to the NCI, "primarily [because of] the belief that we would have our hands full developing the best research attack on human cancer we could with a rapidly expanding program, and it would be more difficult to achieve quality results if at the same time we had to develop cancer control programs." (47) Baker and some of his colleagues subscribed to the belief that "it is usually not possible to provide the rigor of investigational design brought to bear on the types of problems selected by NIH on the types of problems considered in cancer control programs." (48) This philosophic point, "as much as any other... makes it difficult for cancer control programs to find a sympathetic home at NIH." (49)

Baker was not appointed Director of the National Cancer Program, and, concurrently, Director of the National Cancer Institute. President Nixon selected instead Frank J. Rauscher, Ph.D., an NCI virologist and proven administrator. Prior to Baker's departure, since no appropriations for cancer control were specified in fiscal year 1971, Dr. Baker shifted $4 million from other NCI programs into the new Office of Cancer Control and Rehabilitation to launch planning and action. Dr. Rauscher found his fellow Division Direct-

ors--Drs. Nathaniel Berlin, C. Gordon Zubrod, and less so, J. Palmer Saunders*--reluctant to see Cancer Control accorded Division status, despite projected appropriations that would exceed $50 million within three years. Berlin in particular advocated a plan by which cancer control activities--and resources--would be the logical endpoint of biomedical research, with the other Divisions dividing among themselves the discrete cancer control appropriations. Rauscher, who rose to NCI Director from Director of the NCI Division of Viral Oncology, opposed submersion of cancer control or fund distribution among the other Divisions. This, in his view, would violate the intent of Congress. (50) Moreover, he perceived that only by demanding parity among all NCI Divisions would the National Cancer Program continue to receive Congressional favor. (51)

Before the end of 1972, Rauscher appointed former NCI epidemiologist, Dr. John Bailar, III, as NCI Deputy Associate Director for Cancer Control, giving cancer control prominence within the Director's office. (Bailar was at the time Director of the Veterans Administration Research Service.) Two major cancer control planning conferences were held: the National Cancer Rehabilitation Planning Conference in December, 1972 (52) and the National Cancer Control Program Planning Conference in September, 1973. (53) Following release of the NCI's Strategic Plan in September, 1973, eight working groups were assembled to update the recommendations

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* Saunders retired into an academic position in 1974; by mid-1975, Zubrod and Berlin had moved from the NCI to direct the comprehensive cancer centers of Florida and Northwestern University, respectively.

advanced in the original 1971-72 Airlie House planning sessions. Six key members of the rehabilitation and cancer control planning conferences were brought together from January 21-24, 1974, with six staff members of the Office of Cancer Control, among them Dr. Bailar and Dr. Diane Fink, and three staff members from two other NCI Divisions. To a large degree, the program which evolved in the Division of Cancer Control and Rehabilitation stems from the concepts advanced in 1974 by Working Group 8-Cancer Control. (54)

The Office of Cancer Control and Rehabilitation was given Division status in 1974; epidemiologist Dr. Guy Newell, who had been Rauscher's deputy in viral oncology some months earlier was appointed Deputy Director of the NCI. Cancer control was made his particular responsibility. Dr. Bailar moved on to become Editor of the Journal of the National Cancer Institute and author of a controversial paper (55), published in January, 1976, suggesting that radiation from repeated mammographic examinations might induce more breast cancers than saved by mammographic detection alone. (See Book One, Chapter 5).

After a hiatus of several months, a national search and discussions with several potential directors, in January, 1974, Dr Rauscher appointed Dr. Diane Fink as Director of the Division of Cancer Control and Rehabilitation (DCCR). Dr. Fink, a medical oncologist, had been associated with Dr. Zubrod in the NCI Division of Cancer Treatment, with particular responsibilities related to management of the Cooperative Clinical Trials Program.

Under her direction, aided by a group of advisory committees, the Division of Cancer Control and Rehabilitation has attempted to restore to the nation's cancer program a visible and tangible role for cancer control. It has been difficult.

The tumultuous performance of cancer control at the federal level which marked its first 40 years has left indelible imprints. Some scientists and clinicians remain dubious, jealous of the DCCR's budget. Some advisors remain uneasy that communities and practitioners may not be ready for a new assault on applying what we are rapidly learning. No visible constituency has coalesced to sustain the urgency or distinctiveness of cancer control, although fragments of a potential consistuency are scattered throughout American communities and institutions.

As of 1977, critics and skeptics still exist both within and outside of the National Cancer Institute. As Dr. Fink summed up the posture of the Division of Cancer Control and Rehabilitation in late 1975, smarting from a fresh round of criticism leveled on October 8, 1975, at the DCCR's "Community-Based Cancer Control Programs," she noted:

> ...At least in recent history, cancer control has come somewhat on the map. I don't think that can be discounted. Even if we have our critics, at least they talk about it. They have to have some respect for the fact that the program is being done. (56)

Only time--and the omniscient eye of Congress--will tell whether cancer control activities will flourish more effectively within the fabric of the National Cancer Institute or based adminis-

tratively in a more amicable corner of the federal health establishment. Regardless, if the effort is to endure, cancer control constituents will have to be identified, coalesced, and will have to assert their cause with vigor.

(1) National Program for the Conquest of Cancer: Report of the National Panel of Consultants on the Conquest of Cancer. Authorized by S. Res. 376. Prepared for the Committee on Labor and Public Welfare, United States Senate. 92nd Congress, 1st session, Doc. 92-9. Washington, D.C., U.S. Govt. Printing Office, 1971, forward, p. XIII.

(2) Interview with Mr. Ralph Yarborough, attorney, former Chairman, Senate Health Subcommittee and Committee on Labor and Public Welfare, by Devra Breslow of HCCP, February 10, 1977, Austin, Tex.

(3) See note (2).

(4) See note (2).

(5) See note (2).

(6) Letter from Ralph Yarborough, former U.S. Senator, to Devra Breslow of HCCP, February 23, 1977.

(7) See note (2).

(8) See note (2).

(9) See note (2).

(10) See note (2).

(11) See note (2).

(12) See note (1) at 1.

(13) See note (1) at 3.

(14) See note (1) at 5.

(15) See note (1) at 7.

(16) See note (1) at 4.

(17) See note (1) at 4.

(18) See note (1) at 4.

(19) See note (1) at 361.

(20) See note (1) at 365, Section 6, #5.

(21) U.S. Congress, Senate. Hearings before Subcommittee on Health of the Committee on Labor and Public Welfare. 92nd Congress, 1st Session, on S. 34, S. 1828, March 9-10, June 10, 1971, at 35.

(22) See note (21) at 61.

(23) See note (21) at 116.

(24) See note (21) at 122.

(25) See note (21) at 122.

(26) See note (21) at 122.

(27) See note (21) at 232.

(28) Washington Post, April 20, 1971, P. B5.

(29) Interview with Leroy Goldman, former Staff Director, Senate Subcommittee on Health, by Devra Breslow of HCCP, November 7, 1975, Washington, D.C.

(30) See note (29).

(31) See note (21) at 339.

(32) See note (29).

(33) U.S. Congress, House. Committee on Interstate and Foreign Commerce, Subcommittee on Public Health and Environment. The National Cancer Attack Act of 1971. 92-41, 1971, part 1, at 184.

(34) See note (33) at 186.

(35) U.S. Congress. Congressional Record, House. 92nd Congress, 1st Session, p. H12113, December 9, 1971.

(36) National Cancer Act of 1971, Section 409, 2(a).

(37) Interview with Stephan Lawton, staff to House Subcommittee on Public Health and Environment, by Devra and Lester Breslow of HCCP, May 20, 1976, Washington, D.C.

(38) Interview with Robert Maher, congressional staff aide to Congressman Paul Rogers, by Devra and Lester Breslow of HCCP, May 20, 1976, Washington, D.C.

(39) See note (38).

(40) Telephone interview with James Menger, former Staff Director, House Subcommittee on Public Health and Environment, by Devra Breslow of HCCP, November 18, 1976.

(41) See note (40).

(42) Interview with Congressman Paul Rogers, Chairman, House Subcommittee on Public Health and Environment, by Devra and Lester Breslow of HCCP, May 20, 1976, Washington, D.C.

(43) National Cancer Program. Digest of Scientific Recommendations for the National Cancer Program Plan. DHEW Pub #(NIH) 74-570. Bethesda, USDHEW, PHS, NIH, 1974.

(44) See note (43).

(45) National Cancer Program. The Strategic Plan, January 1973 edition. DHEW Pub #(NIH) 74-569. Bethesda, USDEW, PHS, NIH, 1974.

(46) See note (43) at V-17.

(47) Letter from Dr. Carl Baker, former Director, NCI, to Devra Breslow of HCCP, July 8, 1976.

(48) See note (47).

(49) See note (47).

(50) Interview with Dr. Frank J. Rauscher, then Director, NCI and National Cancer Program, by Devra Breslow of HCCP, November 5, 1975, Bethesda, Md.

(51) See note (50).

(52) National Cancer Program. Rehabilitation Planning Report. National Cancer Rehabilitation Planning Conference. Chairmen's Report: June 19, 1973. Bethesda, USDHEW, NIH, NCI, 1973.

(53) National Cancer Program. National Cancer Control Program Planning Conference. Report of the Conference Directors, Rapporteur and Working Group Chairman. Vol. 1 and 2. Bethesda, USDHEW, NIH, NCI, 1974.

(54) National Cancer Program. Working Group Report. National Cancer Program Planning Conference. Summary Report for Cancer Control. Bethesda, USDHEW, PHS, NIH, NCI, June 1975.

(55) Bailar, John C., III: Mammography: a contrary view. Ann. Int. Med. 84:77-84, 1976.

(56) Interview with Dr. Diane Fink, Director, Division of Cancer Control and Rehabilitation, NCI, by Devra Breslow of HCCP, November 4, 1975, Bethesda, Md.

CHAPTER 9

CANCER CONTROL PROGRAMS IN THE STATES (MASSACHUSETTS AND CALIFORNIA)

In 1898, an enlightened New York state legislature inserted an item in the New York state supply bill which read: "For the faculty of the medical department of the University of Buffalo for the equipment and maintenance of a laboratory to be devoted to an investigation into the causes, nature, mortality rate, and treatment of cancer; and the salaries of officials of the same, ten thousand dollars...."(1) This legislative action was the beginning of what became over the next several decades the Roswell Park Memorial Institute--a cancer hospital and research institute operated by the State of New York Department of Public Health.

In 1919, the Massachusetts state legislature authorized the State Department of Health to spend $3,000 "for the purpose of gathering information about the prevalence of cancer and for the purpose of prevention and control of this disease." (2)

By 1948, when Dr. Austin V. Deibert, first Chief of the NCI's Cancer Control Branch, summed up a half-century of state cancer legislation (3), two-thirds of the states had enacted legislation dealing

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Principal Researcher/writer: Devra M. Breslow

with cancer. He observed that "several states have enacted laws similar to those adopted earlier in other states and in one instance (Connecticut and Maine) identical laws have been enacted." (4) As Deibert surveyed how to transfer program ideas from a federal cancer control program to the states, he noted the striking "diversity in these laws," (5) which, he concluded, "makes any hard and fast classification difficult." (6)

Dr. Deibert would come to understand that not only were states differentiated by cancer control legislation, but, more importantly, by the priority which state health agencies placed on conducting cancer control programs.

Many of the greatest ideas in cancer control activity began with state health agencies, conceived and promoted by a handful of concerned physicians who directed official state cancer control programs. The majority of ideas and effective program developments occurred, from 1946-1971, in only a few states: New York, Massachusetts, Connecticut, Missouri, and California, and in more fragmented fashion in several other populous or geographically compact states such as Hawaii. Here at the grass-roots, where the transfer of new technology, new knowledge, and a new cancer control consciousness took place, is where the recurrent skirmishes between public and private medicine took place.

Many thousands of individuals were engaged in cancer control work within states: volunteers and staff of the American Cancer Society; volunteer cancer commissions of state medical societies; and a coterie of physicians, epidemiologists, statisticians, nurses, health educators,

technicians, laboratory inspectors, and others based in state and local health departments. Among those leaders frequently cited as cancer control advocates and activists, based in state health agencies, have been two former state health commissioners, Drs. Herman Hilleboe of New York and Edward Zimmerer of Iowa; epidemiologist-program directors Drs. Louis Kress, Morton Levin, William Wehr, Abraham Lilienfeld, Vincent Handy, and the incumbent, Peter Greenwald, all of New York state; Dr. Matthew Griswold of Connecticut; Dr. Lauren Ackerman of Missouri; and Dr. Walter Quisenberry of Hawaii. In the cancer surveillance activity, by which several major tumor registries were established and sustained, the names of Eleanor MacDonald, her sisters Mary and Frances (Massachusetts and Connecticut) and Mr. George Linden (California) are commonly cited.

This history must be selective. Hence, we have selected as case studies the cancer control program in Massachusetts, where a pioneering, comprehensive approach was taken from 1926-1960; and the program in California, which began in the 1930s under the auspices of the California Cancer Commission (of the California Medical Association) and came into greater prominence from 1946-65, when the California State Department of Public Health advanced on cancer control.

Massachusetts became the prototype state cancer control program. It was the most well-rounded and complete. It featured a state-operated hospital, Pondville State (cancer) Hospital. Although states historically operated hospitals for tuberculosis and mental health patients, only Massachusetts, New York, and Missouri established and sustained, largely through state funds, hospitals for cancer patients.

The Massachusetts program featured a tumor registry and pioneering statistical research capability. Diagnostic clinic and laboratory services were the most visible aspects of professional services, but by no means the only avenues to upgrade the quality and availability of skilled cancer management. The significant professional relationship between agents of the three dominant cancer control forces--the State Health Department (Dr. Herbert Lombard), the Harvard Cancer Commission (Dr. Shields Warren), and the American Cancer Society (both Dr. Lombard and Dr. Warren)--facilitated getting things done which did not threaten the prerogatives of organized medicine.

California, in developing its cancer control program, added a regulatory feature: an attempt to control cancer quackery. The Connecticut program included a state subsidy aimed directly at quality control; hospitals were reimbursed for the case reports submitted to Connecticut's total statewide tumor registry, and the payment was increased if the case report was complete in all details.

The Massachusetts Program

The Massachusetts cancer control program origins began officially in 1926. Its antecedents have been traced to 1896 by Dr. Herbert Lombard in his monograph, The Massachusetts Cancer Program: An Autobiographical Record. (7) Dr. Lombard also recorded the highlights of that cancer control effort in his 1953 publication Twenty-six Years of Cancer Control in Massachusetts. (8) Health historian, Barbara Gutman Rosenkrantz (9) and others (10, 11, 12) have analyzed the program's origins, relevance, and value to the public's health.

Beginning with a review of cancer incidence in Massachusetts by the Massachusetts State Board of Health, in 1896, (13) cancer assumed some importance. In 1913, Massachusetts Governor Foss sent Dr. Francis D. Donoghue to Brussels to represent the state in an international cancer conference. Some months later, January 23, 1914, Dr. Donoghue introduced a resolution into the Massachusetts House of Representatives recommending that the governor appoint a committee to study various methods of cancer therapy, to report the need for further hospitalization, and to devise means of procuring curative agents then so prohibitive in price to the average citizen. Donoghue's report was accepted--but no further action ensued. (14)

In 1915, Representative Levins filed a bill recommending establishment of a state cancer hospital. The bill was referred to the 1916 legislative session, but was withdrawn without action. This preliminary legislative work paved the way for successful passage of the 1919 measure authorizing the Massachusetts State Department of Health to gather "information about the prevalence of cancer and for purposes of prevention and control." (15) The $3,000 appropriation enabled the State Department of Public Health to cooperate with the Harvard Cancer Commission in furnishing diagnostic services to physicians and hospitals and to subsidize a preliminary cancer education campaign. (16)

The next independent step in the cancer movement, as Lombard records it, was introduction of a bill to establish a state cancer hospital. The bill was inspired by the case of Mr. Wilbur Trussell, a telegraph operator with eight children, who had borne the financial

strain of three years' hospitalization of his mother-in-law. Her cancer had "resulted in a long period of invalidism. During the time when she was cared for in the Trussell home the neighbors' fear of contracting cancer by association created more or less severe ostracism for the family." (17)

Trussell held no public office, but his personal brush with cancer motivated him. He organized the Massachusetts Society for the Control of Cancer, whose major goal was legislative action. Although the first bill advocated by Trussell and the Society was withdrawn, public interest was aroused.

In 1925 and 1926, new bills were filed calling for a state-supported cancer hospital. Monsignor Ambrose Roche, among whose duties was the chaplaincy of the Holy Ghost Hospital, where terminal cancer patients were admitted, enlisted the support of Honorable Frederick Mansfield and Mr. Robert White, Assistant District Attorney of Middlesex County (Boston) and prominent in the American Legion. (18) Concurrently, the Honorable Warren Daggett introduced a resolution to investigate cancer prevalence and treatment facilities; the Massachusetts Departments of Public Health and Public Welfare conducted the requested study, for which Dr. Lombard was the field investigator. The study findings further aroused public and legislative interest.

Monsignor Roche mobilized the Daughters of Isabella, an organization "numbering at that time about 10,000 members and having a circle in nearly every community in the State." (19) This group received educational information and conducted extensive publicity;

when the bill was heard, representatives of the Daughters of Isabella came from around the state.

The bill was debated in the House for two days--and passed. "While the Massachusetts General Court was considering the bill one enthusiastic supporter commented somewhat as follows: 'Sixteen of you are going to die of cancer and there is no place where you may be cared for.'"(20) No appropriations were included in the budget, but an amendment authorized a vacated facility known as the Norfolk State Hospital to be used. One hundred thousand dollars was to be appropriated to recondition the buildings; an additional $30,000 was to be appropriated to establish cancer clinics throughout the state. In this form, the bill passed.

The cancer bill appropriations was competing with two other measures--one to support a Massachusetts exhibit at the Sesquicentennial in Philadelphia, the other to erect the St. Mihiel [sic] Memorial in France. Governor Alvin T. Fuller selected the cancer program.*

On May 29, 1926, the measure became law: Chapter 391 of the Acts of 1926, an act to promote the prevention and cure of cancer and the extension of resources for its care and treatment. The salient characteristics of the bill lie in these excerpts:

. the department of public health...is...authorized and directed to formulate a plan for the care and treatment of persons suffering from cancer.

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* Nearly 40 years later, Fuller's descendants gave a half-million dollar gift to the Massachusetts Division of the American Cancer Society to endow an academic chair in radiation therapy at Harvard Medical School.

- the department shall establish and organize cancer clinics...and shall conduct such clinics with or without the cooperation...of municipalities, local physicians and other agencies. [Emphasis added.]
- ...the department may expend during the current fiscal year for [these purposes] a sum not exceeding $15,000. ...the department is...authorized to make use of the Norfolk State Hospital...[for which purposes] a sum not exceeding $100,000 [is appropriated] . (21)

The Massachusetts Cancer Control Program

The Massachusetts program, as Lombard wrote in 1953, consisted of "research, hospitalization, diagnostic clinics, tumor diagnostic service, and education." (22) The program was based "on the accumulation of experience gained largely through trial and error. Since Massachusetts was compelled to pioneer, all procedures [were] subjected to evaluation in order to gauge their effectiveness." (23)

The core of the Massachusetts cancer control program was cancer surveillance and resultant statistical studies. Lombard, the program architect and guiding force, describes it this way: From statistical studies, the Massachusetts cancer program received its inspiration, determined its scope, evaluated its activities, changed its policies, and obtained new ideas for cancer control. (24)

The data base from which Dr. Lombard and his battalion of statistical clerks--called "collaborating epidemiologists"--worked was generated from death records, hospital records, clinic records, questionnaires to physicians, records of contracts with individuals

concerned in the educational program, follow-up cancer management records, and when resources permitted, personal interviews gained in house-to-house surveys. Profound contributions about the natural history and management of cancer emanated from the formidable statistical and methodological work of Lombard's cancer surveillance laboratory. Among observations that came from this State Health Department resource were these:

- In 1927, it was found that the logarithm of the adjusted cancer rate increased with the logarithm of the density of population, up to densities of about 4,000 persons per square mile, and from there on remained practically constant. (25)
- The reason for this relationship was subsequently found to be the high cancer death rate of foreign-born Americans and their children, both of whom experienced more cancer than native born Americans with native grandparents. This was particularly marked for stomach cancer. (26)
- In 1945, Lombard's coworkers, Potter and Tully, published findings which demonstrated a definite association between cancer of the buccal cavity and the use of tobacco. (27)

The Massachusetts Tumor Registry (MTR), while by no means comprehensive in recording all cases of cancer in the state, did capture and follow to death all cases managed in the major hospitals of the state. In developing the California Tumor Registry two decades later, Dr. Lester Breslow adopted this same selective pattern. The data which flowed into the MTR became crucial in determining whether

management practices were changing, how survival was so affected, and what other factors could be gleaned that had educational potential for laymen and health professionals. For example, through the MTR, coupled with the state-supported diagnostic service, Lombard observed in 1953 that 10-year survival rates for breast cancer had increased 100 percent over an 11-year period; during this same period, 10-year survival for cancer of the female genitals had increased 50 percent. (28) A fundamental decline in cancer death rates was observed from 1926 in males and in the 1930s in females. Only through the registration system could such change be observed over time, which Lombard wrote, "offers data for speculation as to what part...may be attributed to cancer control activities and what part to other causes." (29) The MTR also was able to show that the length of time between first symptoms and first consultation with a physician, and then to a clinic, was reduced by 50 percent since the cancer control program was initiated. (30) The same delay between first visit to a doctor and first visit to a state clinic in 1927 was 5.4 months; in 1951, it was 2.3 months. (31)

Full partners with the MTR were tumor clinics. In 1953, 20 Massachusetts hospitals (those seeing the largest numbers of cancer patients) maintained state or state-aided clinics. (32) The clinics were administered by physicians appointed annually by the local medical society or hospital staff. The staff served without compensation, with the state purchasing certain services for indigent patients. The standard consultation fee of $10 was waived for indigents. The tumor clinics furnished group--multidisciplinary--diagnosis for any

individual in the state whose physician suspected cancer. (33) Individuals could be self-referred but more typically were referred by a family physician. In addition to medical diagnostic and treatment consultation, medical social service was available and follow-up services were maintained until death. Only 2.3 percent of clinic cases were lost to follow-up, when Lombard wrote in 1953. (34) Even less, 1.5 and 1.6 percent, were lost among women with cancer of the genital organs and breast, respectively. (35)

From 1927-1953, over 100,000 new patients were seen in Massachusetts cancer clinics. About one-third were found to have cancer. By 1950, fully 86 percent of persons attending clinics were referred by physicians, (36) and more than 80 percent of the recommendations made at the clinics were carried out within one month of clinic admission. (37) Clinic attendance greatly exceeded new cases, since there were nearly 25,000 return visits each year of former cancer patients. (38) "Studies have shown that the presence of a clinic in a city increases the number of individuals seeking advice for cancer in the physician's private offices." (39) For those patients served by the state, the cost was $4.30 per patient, including examination, return visits, and home visits by a social worker.

Lombard admitted that organizing the clinics statewide was the most difficult cancer control activity. "The general practitioner's fear of governmental control of medicine had to be overcome by constantly reiterating that the purpose of the program was to augment the facilities of the individual practitioner, not to supplant them. (40)" [Emphasis added.]

The solution was to adapt the clinic program to the desires of the local medical community. In one community, a Boston specialist was hired to conduct a monthly clinic; in another, each one of seven hospitals wanted to participate--so a rotating service was developed. (41) The key, Lombard wrote, was "a policy of attempting to convince the medical profession of the value of the program rather than forcing its acceptance." (42)

A free tumor diagnosis service was a superb adjunct to the clinic program. The State Department of Public Health paid the Harvard Cancer Commission $3 for each specimen reviewed. Any physician or hospital could submit a suspected tissue for pathological examination. The service was used by surgeons who lacked hospital pathology facilities and by pathologists who sought confirmation of their diagnoses. In the early 1930s, about 500 physicians used this service, providing about 2500 specimens. In 1952, over 1100 Massachusetts physicians used the service, submitting nearly 10,000 specimens each year. (43)

All of these efforts enhanced physicians' knowledge of cancer and, it is assumed, did upgrade the quality of cancer management. Cancer education was shared with the Massachusetts Division of the American Cancer Society (ACS), particularly for lay persons, but the state-supported clinics became a focus of additional professional and public education. For decades, the Massachusetts State Health Department issued a quarterly abstract bulletin to all requesting physicians; in 1940 and 1950, the Department purchased and presented to every registered Massachusetts physician Cancer, a Manual for Practitioners,

the classic 300-page book compiled by the ACS Massachusetts Division and a list of distinguished contributors. (44)

In 1932, the first of several "cured-cancer clinics" was established. Patients free of cancer for five years or longer were present at a clinic where their case histories were reviewed. The diagnosis was verified by a reexamination of the original pathological slide by three pathologists. (45)

Teaching clinics were then developed, focused at general practitioners. Between 1933 and 1953, 490 teaching clinics were held, attracting 12,661 physicians. (46) Cancer institutes for nurses, including a two-week period of instruction and observation at Pondville Hospital and hospital tumor clinics, were held twice a year for decades. (47) Cancer education was also devised to reach medical students, health professionals, and the lay public. Mass media was employed; cancer education was incorporated into public school curricula.

Between 1935-1948, the State Health Department conducted public cancer education by organizing cancer control committees in every city and town in the state. Representatives from all walks of community life organized at least one meeting a year when the public could learn about cancer from a local physician. After 1948, the revitalized American Cancer Society, Massachusetts Division, took over public cancer education. But the Health Department did evaluate educational methods, conducting a public knowledge survey in

Waltham, Massachusetts, which provided valuable clues as to the degree of ignorance or resistance to facts about cancer.

Two major studies undertaken by the Cancer Control Program of Massachusetts provided information of national significance with respect to organized cancer detection activities. Under a Public Health Service grant, a cancer detection center was evaluated. Among the conclusions drawn were that the place for examination of persons with symptoms was the private physician's office, not a detection center; that the few cancers found among asymptomatic persons, as well as the high examination cost, precluded large-scale financing by governmental or voluntary agencies; and that many of the procedures performed in a detection center could be done by the general practitioner if proper instruments were available to him at reasonable cost--and if he were willing to spend sufficient time in taking a medical history and making an examination. (48)

A six-year experimental study was inaugurated in 1945 by the Massachusetts Department of Public Health to evaluate, from an administrative view, the use of the Papanicolaou smear in diagnosing uterine cancer. Among its findings were that the incidence of uterine cancer among asymptomatic women was less than one percent; among those with bleeding, 30 percent; and among those with other gynecological symptoms, about 10 percent. (49) The conclusion was that "it does not seem feasible for a state health department to offer this test on an extensive scale for women without gynecologic symptoms, since the cost would be prohibitive and the numbers of cancers found would be relatively few." (50)

Conclusions from the cancer detection clinic study coincided with the convictions of American Cancer Society medical spokesmen (see Book Two, Chapter 10) that cancer detection was best performed in physicians' offices. Lombard's findings about the relative cost to case yield in mass screening of asymptomatic women for uterine cancer was consistent with the views of many American pathologists and American Cancer Society medical spokesmen who effectively stalled mass screening for cervical cancer in the 1940s and 1950s. (see Book Two, Chapter 10). But his own Boston associates, Drs. Joseph Meigs and Ruth Graham, differed with Lombard about this issue. (see Book One, Chapter 4).

Pondville Hospital

The institutional program of cancer control was administered by another section of the Massachusetts Department of Public Health. The Pondville Hospital, located 40 miles southwest of Boston, was converted from a former sanitorium for drug and alcohol addicts; it had 139 beds in its first phase. The Monsignor Roche wing of the Westfield State Sanitorium contained 50 beds. Eventually, the Lemuel Shattuck Hospital in Boston was built to care for patients with all types of chronic disease; 200 cancer beds were included. In 1953, less than five percent of Massachusetts cancer patients were being cared for at Pondville or Westfield. The patient population was largely drawn from the surrounding community and Cape Cod.

A comprehensive review of Pondville's contribution to its community and state cancer control activities has been compiled by Dr. Ernest Daland. (51) The personnel and equipment resources at Pondville, coupled with a small investigational research laboratory, have been consistently first class. Dr. Daland himself, Chief of Staff of Pondville for 32 years, was clearly one of the reasons, because the physical facilities until recently were quite archaic and depressing in character. The great strength of the Pondville Hospital service has been its skilled and dedicated medical and nursing staff. One hundred and sixty-three physicians received their specialty oncologic training at Pondville by 1953; (52) the number has probably doubled since then. All had completed residencies in other insitutions. At the conclusion of their Pondville experience, they were not only proficient in cancer diagnosis and treatment, but most, Lombard indicated, "were interested in the entire control program." (53) Nearly half of them opened offices in Massachusetts communities. (54)

Both Pondville and Lombard's program were served by advisors who were giants in their medical specialties. The sense of personal involvement was deep. To be a member of the Daland Society--alumni physicians of Pondville--is highly prestigious today in Boston.

Because nurses were hard to attract and retain at Pondville due to the rural locale and lower than metropolitan Boston salaries, a school to train licensed vocational nurses was established and continues to produce nurses expert in oncologic nursing. For decades, the medical teaching service at Pondville thrived without formal

affiliations with the four Massachusetts medical schools. An accomplishment of Dr. Henry Kolbe, recently retired superintendent of Pondville, has been to formalize these academic affiliations.

Over the years, there have been several attempts to relocate or close out the functions of Pondville Hospital. Each attempt at closure has resulted, conversely, in renewed concern for the physical plant and augmented state appropriations for renovations. Community politicians have effectively blocked closure or relocation. Pondville is now located about 45 minutes from Boston's hub, but is within 90 freeway minutes of any part of Massachusetts. When State Representative Cataldo of nearby Franklin introduced a bill in 1963 to build a new 150-bed facility at Pondville (to replace 1914 vintage quarters), residents south of Boston enthusiastically supported the idea. Funds were appropriated for plans, although then Health Commissioner Dr. Alfred Frechette had proposed a study of the state's role in cancer care--not a facilities plan costing $15,000,000-$18,000,000 to execute.

> My agenda was to try to continue a research program supported by the state--but to bring it into the Boston area. Research at Pondville was too isolated from the mainstream.... This would be a better way for the state to spend its money.... The personnel at Pondville interpreted that I was trying to destroy Pondville. (55)

Frenchette met with Pondville employees. He had closed a tuberculosis sanitarium two years before, without a single employee losing his job. Alternative state positions were found.

But Frechette lost this round. A new Pondville, its patient care facility named for Dr. Ernest Daland, opened on October 22, 1969.

Pondville continues to attract senior consulting physicians and oncology residents from Boston; it provides high quality, personalized care for thousands of Massachusetts residents who are spared the additional traffic to and in Boston's academic medical jungle; but the facility is, by the admission of its present staff, underutilized. Currently, there is considerable interest in developing a community cancer control program radiating out from Pondville.

The Guard Changes

Dr. Herbert Lombard retired from his post as Chief of the Division of Cancer and Chronic Diseases in 1959. He was 70 years old. He was ultimately succeeded by Dr. Harry Phillips, whose prime interest was home care and who freely admits he concentrated on that aspect of chronic disease control during his tenure in the 1960s. In Phillips' perception, there was no public demand for cancer control as there was for renal dialysis, nor was there one single individual delegated authority for cancer control. (56) What the public did want, Phillips contended, was long-term care, and there were federal incentives to move into that area.

What made things work for Dr. Lombard? Relationships with organized medicine and with health commissioners were obvious factors.

> I practiced medicine five years before I went into public health, and I know how to handle them [private physicians]. At least I thought I did. By letting them think [something] was their idea.... My biggest problem was the commissioners. I worked under six different ones: three of them were with

> me and three of them were against me....
> So I broke even....
>
> One good man would change the cancer program.... We had one man in Lowell. He got an incurable disease and had to give up his practice. But he kept on the clinic as long as he could. He was that devoted.... One of our commissioners said,'You've done all you can do in cancer. Now you better turn on to some other disease....' I got mad.... I didn't pay any attention to him.... He tried to stop me from working on cancer.... What I tried to do was play along with them [commissioners], help them in their line, but not give up on cancer. I got away with it until I retired. (57)

From fiscal 1950-1951 through fiscal 1966-1967, federal cancer control subvention funds to Massachusetts totalled $1,385,413. These were matched by state appropriations totalling $3,540,214. Federal funds fell from $117,890 in 1950-1951 to as little as $66,198 in fiscal 1959-1960, but Massachusetts state appropriations averaged $260,000 annually for the period 1957-1965. By far the largest portion of these combined funds was used to support the Massachusetts Tumor Registry, tumor clinics, and the Harvard Cancer Commission for tumor diagnostic services. (59)

Dr. Lombard's retirement signaled other changes. The Massachusetts Tumor Registry, in which the NCI's End-Results Program, later SEER Program, took great interest, eventually was defunded. Dr. Leslie Lipworth, recruited as Registry Director in the late 1960s, tried to develop a population-based registry in Boston, but some hospitals were reluctant to contribute to the MTR when their annual state subsidy for that purpose and operating tumor clinics was dropped from $12,000 to $4,000 a year. (60)

The death knell was sounded in 1973 by Dr. Charles Neave, then in charge of the State Health Department's Office of Health Planning and Statistics.

> One of the "hunks" [of state statistical and data gathering resources] was the thing called the Tumor Registry.... It had operated since [1926] in fits and starts.... It was always a voluntary situtation.... At the time I had responsibility, the funding came from two sources:...a line item budget of great antiquity in the state appropriation of $85,000 a year...purportedly to be used only for patient abstracts;...the second a contract with NCI's End-Results Group, for about $160,000.... Then there was a lot of in-kind support....
>
> Over the years, the Registry had become isolated from everything.... It sat out in the Shattuck (Hospital).... Commissioner Bicknell didn't know that it even existed. (61)

What tipped the scales against the Registry was a new Massachusetts health law for which a long-term information system was required. Neave explained:

> In order to run this system, and there were real hot regulatory issues involved, we had to find people in State positions with expertise. ...So I wrote to Bicknell...saying that one of two things has to happen. Either this Registry has got to be hoisted up, which will take major and difficult changes in personnel, or we should scrap it.... Then there was the...$85,000 which were coming under scrutiny for the first time by the Legislature.... It was getting increasingly evident that these funds could be zapped. (62)

Conveniently, someone at the Shattuck Hospital wanted the physical space occupied by the Registry. And while the NCI End-Results Group argued that the Registry had national value, no local advocates clamored to retain it. A plan was advanced by a consortium:

Harvard School of Public Health, the Sidney Farber Comprehensive Cancer Center, the State Health Department and the Massachusetts Hospital Association, but it was unacceptable to the End-Results Group. More fundamentally, there was no health department interest in sustaining this oldest American Tumor registry.

In 1975, Neave became Deputy Director for Cancer Control of the Sidney Farber Comprehensive Cancer Center. His "very strong view" about a registry is "that it is only useful as a clinical follow-up tool. It is essential to have it where you are doing any kind of experimental treatment". (63)

> There's nothing holy about cancer anymore than following up on myocardial infarction.... Follow-up should be welded into another mechanism at the community hospital [such as utilization review and medical audits].... The State is ill-advised to operate a central tumor registry just for epidemiologic purposes....
>
> For public health planning,..we need a different data system.... There is a need for something that links the occurrence of cancer, a specific type, to events or things in the environment.... This is surveillance.... Then, we need data involving the distribution and utilization of resources... certificate of need [information].... The classical registry has nothing to do with resource allocation....
>
> What we're seeing since the closing of the Registry is, I think, a healthy return to rethinking what it is that hospitals want out of a registry....
>
> The greater pressure has to do with...the realization that you can't take care of cancer patients, say, without radiotherapy.

> You can't get the equipment without speaking to HSA [Health Service Areas]. You can't get a certificate of need without showing multiple facility use of the facility....
>
> You see the forces pulling together.... There's the fear of regulation, such as the unpromulgated action we tried to put through. (64)

In 1975, the Massachusetts State Health Department promoted a bill which would have limited Medicare and Medicaid payments for cancer care only to board certified specialists and services conducted in hospitals approved by the American College of Surgeons' Cancer Commission. The measure failed, but may well be introduced again in Massachusetts or in other states concerned with quality controls.

Little of value related to cancer control emerged from the eight or so years in which Regional Medical Programs functioned in Massachusetts. The Sidney Farber Comprehensive Cancer Center, honoring the father of moderm chemotherapy, the late Sidney Farber, is now the focal point of cancer control planning within the state. The Massachusetts State Health Department, which set the pattern emulated in part by many other states, is one constituent member of the Center's Cancer Control Task Force. The majority of cancer detection and management is unmistakably in the control of the private medical sector and the four medical schools. A distinct role for the State Health Department in future cancer control activities in Massachusetts is unclear.

California's Cancer Control Program

Although pilgrims had settled in Massachusetts 300 years earlier, California, at the opposite end of the continent, in the 1920s was considered "the last frontier." Two medical schools, Stanford and University of California at San Francisco, both in the San Francisco Bay Area, dominated academic medicine. Los Angeles was yet to be discovered by filmmakers, sun-worshippers, physicians, and cancer quacks. The center of California's medical community was in San Francisco; until the 1950s, the State Department of Public Health was located there as well.

The initiative for cancer control activity was first sparked by the California Medical Association (CMA), whose Cancer Commission Committee Studies (65) were well circulated through the journal California and Western Medicine. These studies, undertaken by volunteer physicians in practice and academic medicine, expressed the prevailing best judgment concerning how to detect, treat, and generally manage cancer by site.

Some years later, under the direction of Los Angeles pathologist E. Butts, a "Slide Tumor Registry" was established by the CMA Cancer Commission at the Los Angeles County General Hospital. This was an educational adjunct to the CMA's published studies, as well as a useful diagnostic consultative service. By the late 1940s, the CMA Commission had identified and approved nearly 60 California hospitals as operating a Consultative Tumor Board, a multidisciplinary tumor clinic program very similar to that in Massachusetts.

The leaders of the CMA Cancer Commission in the 1940s, 1950s and early 1960s were concurrently the medical board of the American Cancer Society's California Division. Many eventually served on advisory committees of the State Department of Public Health, particularly those relating to cancer control and laboratory services. Cancer control policy, therefore, was in the hands of a nucleus of physicians who were, in 1945, clinical specialists already prominent in regional and national medical circles.

Onto this scene came a young epidemiologist, Dr. Lester Breslow, recently discharged from the Army Medical Corps, who had some notions about the relevance of chronic diseases. At that time, the California population was just about 10 million; 29 percent of the people still lived in rural areas; only 4 percent were nonwhite (black, oriental); and 13 percent were age 60 and over. (66) Each year, nearly 15,000 Californians were dying of cancer, the major sites being stomach and other digestive organs (colon-rectum, etc.), the respiratory system, the female breast, and uterus. These statistics did not impress the State Health Officer, Dr. Wilton T. Halvorson, and what Dr. Breslow suggested to him as an opportunity for future actions was equally unmoving. Instead, if Dr. Breslow wanted to work in California's postwar health department, he was invited to study encephalitis in depth in the San Joaquin Valley, where an epidemic outbreak was of greater moment. Dr. Breslow accepted the position.

The first opportunity for addressing chronic disease control--and cancer control--came only nine months later in the fall of 1946, when earmarked cancer control federal subvention funds became available.

Since Dr. Breslow's enthusiasm was unflagged, expressed through a stream of memoranda he sent to Dr. Halvorson from the San Joaquin Valley, he was selected to develop the chronic disease program of the State Department of Public Health. Three decades later, Dr. Breslow recalled:

> Almost the first thing I did after the Bureau of Chronic Diseases was established was to visit three eastern states--Massachusetts, New York, and Connecticut. A good deal of what ultimately was developed we fashioned after these state health department programs.
>
> Dr. Halvorson made it clear to me that it would be necessary to get along with the CMA. That was rather easy, because the California Cancer Commission had already done progressive work in the past, and that body constituted a ready liaison with the CMA. (67)

The next policy step was to seek the support and assistance of local health departments, which were "quite good in those days," Dr. Breslow claimed. (68) A major advance was made when the Health Department interested a joint legislative committee to ask the Department to study the extent of chronic disease in California. Aided by an impressive Chronic Disease Advisory Committee and technical advisory committees from the CMA Cancer Commission and four voluntary health agencies, the Department's staff report summarized cogently the need for chronic disease programs and the potential for impact. (69) This legislatively certified report became the ammunition for a barrage of programmatic activity--research, surveillance, health education, specialized training--consistent with the legal mission of the State Health Department. Less than 15 years later, in 1960, this comprehensive Bureau of Chronic Diseases was given a special citation by the Albert and Mary Lasker Foundation.

Although cancer was not a reportable disease in California, the attorney general's office rendered an opinion that the reporting of cancer cases and follow-up status was desirable, thus paving the way for the first component of the state's program: establishment of the California Tumor Registry in 1947. As with the Massachusetts Tumor Registry, the California Tumor Registry (CTR) was selective, collecting case reports and follow-up through death on approximately one-third of California's cancer patients. At its peak, the CTR covered 57 hospitals; in the 1960s, a population-based sub-registry was developed which covered all cancer cases seen in all hospitals of the five-county Bay Area. The CTR is the largest tumor registry in the world, with over 400,000 cases having been entered. Less than five percent have been lost to follow-up. The aggregated data are useful not only to individual participating hospitals, but are combined with comparable, uniformly collected national and international information.

Dr. Breslow explained:

> The California Tumor Registry congregated biometry and epidemiology experts who looked around to see what should be done programatically. It also furthered the development of early detection by discovering some forms of cancer where the outlook was poor [because] the disease was already far advanced. And the Registry opened up opportunities for epidemiological studies, especially contracts with key cancer-caring professionals, and by using the [state's] death certification system for lifelong follow-up. (70)

For example, the Registry confirmed the rapid increase in lung cancer incidence and deaths and the abysmal outlook for gains in survival through detection and treatment. This did stimulate

attention to etiological factors such as cigarette smoking. From Registry data it was clear that patients whose disease was detected at a localized stage survived longer than those with more advanced disease. The benefits of early diagnosis in breast and cervical cancer were strikingly revealed through Registry information.

As a consequence, the State Health Department also maintained a cancer epidemiology research unit, largely funded by federal grants, headed by former NCI staffer Dr. John Dunn. Over the last three decades a steady stream of observations and publications have emanated from this unit, many focused on occupational and environmental factors in the etiology of cancer.

The bulk of federal cancer control subvention funds to California were committed to the Registry. To Dr. Breslow, chief of the Bureau of Chronic Diseases at that time, the rationale was clear. "So much could be achieved in understanding the natural history of cancer, how cancer was managed in California, what physicians, other health professionals, and the public needed to learn about cancer," (71) that the Registry was a natural priority.

A second cancer control component was to seek the participation of public health nurses in local health departments and voluntary agencies (Visiting Nurses Association), "exhorting them to include cancer education and detection in their regular activities." (72)

A third element was to train individuals in interpretation of the Papanicolaou smear. "We had to deal with pathologists, through the Cancer Commission, as to who should be trained. The decision was made to train young pathologists, although it was perfectly obvious

that others could be trained, and that for mass screening applications, people other than physicians could screen slides." (73) But, Dr. Breslow explained, "For quality control, the work had to be under pathologists." (74) Hence, the Department did not actively engage in subsidizing the training of cytotechnicians.

By the mid-1960s, however, some of the federal cancer control funds allocated around the state by announcement and competitive application to the State Health Department did support cervical cancer screening in county health departments and hospitals, and also supported a mammographic exmaination demonstration project at a northern California free-standing medical foundation. In fiscal 1967-68, fully 40 percent of the $92,275 federal allocation was allocated to 11 public and private agencies to continue cervical cancer screening. (75)

In the early 1960s, "in the flowering of the Shannon era," (76) there was considerable scientific excitement over the possible viral etiology of cancer. As the viral approach to cancer became popularized, support was attracted to the California State Health Department, in which a distinguished virus laboratory under the direction of Dr. Edwin Lennette had been ongoing since the 1940s, when it was first established by the Rockfeller Foundation. The concept of "field studies" had taken hold at the NCI, where Dr. Michael Shimkin was director of an NCI Division bearing that name. (see Book Two, Chapter 6)

Developing a field studies program within the California State Department of Public Health was promising. In addition to established competence in virology and epidemiology, Dr. Breslow recalled, "About the same time, scientists were intrigued with the natural occurrence

of cancer in animals, especially domestic animals. The possibility of passage of certain forms of cancer among species, from animals to humans, and vice-versa, was quite real." (77) Therefore, with federal support, the Department added to its veterinary staff two epizoologists who developed a domestic animal tumor registry for Alameda and Contra Costra Counties that was even more comprehensive than the California Tumor Registry of human cancer cases. A chemical carcinogenesis section was added, although it was relatively unproductive. These four elements--virology, epidemiology, epizoology, and chemical carcinogenesis--were the basis of the California Cancer Field Studies Program (CCFSP). The NCI generously supported the CCFSP and supplied construction funds for a $1 million laboratory wing to house the program. In 1966, after five years of recruitment, resource building, and considerable progress, the NCI defunded all but the viral etiology studies.

Why did the program break apart? In retrospect, Dr. Breslow believed, because "field studies were not supported nationally at the highest level of biomedical decision-making. Clinical research and laboratory studies assumed great popularity. There was no strong push from the top.... The advances were slow...leads took a long time to investigate." (78)

Dr. Shimkin, and Dr. Dunn before him, left the NCI Field Studies to pursue other activities. The only field studies effort which did survive was that promoted by NCI's Dr. Robert Huebner, with special virus research funds: first in a virus research program based at University of Southern California and Childrens Hospital of Los Angeles; and since 1973, by underwriting the Los Angeles County

Cancer Surveillance Program, in which etiological leads--not always viral in origin--are derived from comprehensive surveillance of cancer in a large defined population.

Dr. Breslow moved up the administrative ladder of the California State Department of Public Health, serving from late 1965 through 1967 as Director of Public Health, but the cancer control program he had organized continued, at least in fragments. There has always been a tendency to work cooperatively with the American Cancer Society and the CMA's Cancer Commission. The Commission, later Committee, was eliminated in a CMA budget crisis in December, 1974. Over the years, all of the educational functions undertaken since the 1930s by the Commission had been subsumed by the ACS; except for taking positions on various legislative proposals, the Commission had become inert.

Cancer Quackery Law

In its dynamic period the California Cancer Commission led the way for anti-quackery legislation. Beginning in the 1930s, the Commission cautioned practitioners about misleading and ineffective cancer diagnostics and therapeutics. As the problem intensified, individual Commissioners took up the cudgel. Dr. Eugene Miller, Medical Director of the American Cancer Society, California Division, recalled:

> I remember Dr. Ian Macdonald telling me how in the 1950s he used to park his car in front of a known cancer quack's clinic. He would count the number of people who went in and out over a period of several hours. Then he would give this information to a reporter for the Los Angeles Times. The published story had absolutely the opposite effect from what Macdonald expected. Even more people would show up to see the quack. (79)

It was then that Drs. Macdonald, John Cline, and others active in the Commission began working with the California Legislature to enact a law permitting the State Health Department to evaluate diagnostic and treatment modalities, to ban those devices and agents found ineffective, and to impose misdemeanor charges against proponents of banned materials. It took over five years for the measure to be passed. In 1959, California adopted Chapter 7, sections 1700-1721, of the Health and Safety Code on a six-year trial basis. The measure became permanent legislation in 1969.

Under the California law, the State Department of Health is the enforcement agency that controls quackery in the diagnosis and treatment of cancer. Its efforts are assisted by the Cancer Advisory Council, a 15-member board of physicians, scientists, and laymen appointed by the governor. After a complaint is received by the Council (from an individual, a health agency, physician, or governmental agency), the Council evaluates the merits of the complaint and may request the Cancer Diagnosis and Therapy Evaluation Unit of the State Department of Health to conduct a detailed investigation of the treatment in question. After sufficient evidence is collected (which may be a time-consuming process), the accused party is subpoenaed to appear at a confidential investigatory hearing at which he is asked to furnish samples of and information about his drug or treatment.

If the accused does not furnish these materials at the hearing, there is a conclusive presumption that the agent is without value in the diagnosis, treatment, alleviation, or cure of cancer, and the appropriate penalty is recommended (usually a cease and desist order).

If the individual appears with the requested material, the State Department of Health must prove the remedy ineffective.

As of this date, none of the agents that have been reviewed by the Council has been found to have the value claimed by its proponent. Once an agent has been found to be of no value, further hearings may be conducted, and a regulation prohibiting its use may be adopted by the State Board of Health and incorporated into the California Administrative Code (Chapter 5, Sub-chapter 2, Article 2, sections 10400 et seq.). Eight cancer treatments are now entered in the Code as having no value--the Hoxsey Method, Laetrile, the Bolen Test, Koch Agents, Lincoln Staphage Lysate Agent, Mucorhicin, the Anthrone Test, and Krebiozen. (80)

Other states have followed California's initiative (see Book Two, Chapter 10), but the cancer quackery problem is far from resolved merely by a law. According to Dr. Joseph Ross, four times Chairman of the California Cancer Advisory Council, a quack may claim that his remedy is merely a vitamin or nutritional diet or diet supplement--circumventing the law's boundries, despite the fact that persons may be relying on his "nutritional" method rather than seeking a more conventional, effective treatment modality. (81)

Further, the intent provision of the California law has been modified to require motive of intended fraud, which makes proof of the law's violation exceedingly difficult. The law, according to Dr. Sherwood Lawrence, Executive Director of the Council, has been considerably weakened. (82)

Individual states are left to handle the cancer quackery burden themselves. The cost to California citizens of one alleged agent,

Laetrile, has been estimated by Dr. Ross as between $40 million and $60 million annually. (83) The FDA has estimated that a billion dollars a year is spent annually on quack remedies of all types. (84) But since federal law applies only to new or experimental drugs moving in interstate commerce, drugs and treatments which do not cross state lines are exempt from federal Food and Drug regulations. California has shown the way--yet continues to have the grossest cancer quackery problem of all states, being contiguous to Mexico where some of these agents are manufactured. The problem appears to growing, and federal law is too precisely limited to effect positive change.

Reflections: California Program

The California State Department of Public Health, as it was known until recent years, was the technical and ideological vortex of cancer control planning in the state. The California Cancer Commission and American Cancer Society had defined roles, operating in the arena of organized medicine and at the interface between the private sector and public health agency. Limited cancer control activities were developed in universities, the most notable being the registry training program at University of California-San Francisco Medical Center, initiated with federal funds, and the limited work of several cancer coordinators. Extensive cancer research capabilities were established in California throughout the past four decades, including an oncologic field research laboratory in San Francisco directed by Dr. Michael Shimkin before he was elevated to Chief of NCI Field Studies.

But the overriding guidance for cancer control work came from the State Health Department in a period when it was becoming distinguished for progressive research, pioneer standard-setting and monitoring, and capable program coordination for a state that was growing in population at a staggering rate.

If he had to do it again, Dr. Breslow believed, there is one fundamental change he would make.

> I would have concentrated a very sizeable amount of the resources in one well-defined community in the state, to determine what could be accomplished by a concentrated effort in cancer control, and also in studies of cancer, and a comparison of what was happening in such a community over the years...with comparable communities in the state.
>
> I think that if we had focused on the problem that way--that is, focusing our resources in a demonstration--that more might have been accomplished.
>
> If we could have found a community, or a county, or a portion of a metropolitan area, where we could concentrate our resources, with the help of the local health department, the Cancer Society, the medical association, hospitals--all of the important elements of the establishment--that it might have been better....
>
> At least that's how I think we ought to attack cancer at the present. And I think it might have been good to do it that way 25 years ago, if we'd thought of it. (85)

Reflections on State Programs

Only a few American states developed visible, penetrating cancer control programs from 1947-1971. Not the least deterrent was money. Although each state was accorded federal cancer control funds to be matched by the states, the amounts of awards in many small states were inconsequential. They would not even support a full-time health

department physician to mobilize activities. Only in the more populous states and those in which initiative had been taken by the medical association prior to 1947 was much accomplished. Even increasing the minimum annual grant award to $25,000 per state did not make an appreciable dent in the effort. Dr. Leonard Scheele has been credited by his colleague Dr. John R. Heller with the original decision to give the states federal cancer control funds, in the pattern established to managed federal-state maternal and child health programs. (86)

Yet Scheele's vision of how federal-state relationships could facilitate the propagation of cancer control ideas was sharply limited by the relatively greater resources committed to other aspects of the total cancer control program. There was an attitude of laissez-faire between the federal cancer control program staff and many state health agencies, which were directed by health officers not readily seduced to mold their local programs by federal directives.

Those cancer control programs which did flourish in states did so when these characteristics were present:

. Genial working relationships existed between the state health agency, the state medical association's cancer commission, and the local division of the American Cancer Society. A tacit understanding developed between these three major forces as to function and limits. For example, progress was assured when the medical profession was not suspicious of health officials who organized clinical services with them and also did not threaten clinical services previously established by fee-for-service physicians and/or hospitals.

- The health department concentrated its program on cancer surveillance, promotion of prevention and health detection, and the operation of noncompetitive cancer facilities authorized by law (e.g., New York, Massachusetts, Missouri).

- The state cancer control officer trusted his federal counterparts to provide him with adequate funds, ideas, materials, and, where possible, to loan physicians trained in cancer control techniques for rapid community demonstrations.

- A committed cancer control officer was in place, given encouragement and support by his health commissioner, and, in turn, by the the legislature and even the governor.

- Medical society and American Cancer Society spokesmen were dependable local advocates for sustaining state funds and seeking legislation when warranted (e.g., California's cancer quackery law).

(1) Laws of the State of New York, 1898, Chapter 606, p. 1449.

(2) Cancer Control--The What, Whither, How. The Committee on Publication, 483 Beacon Street, Boston, at 3. Quoted in Deibert, A.V.: A half century of state cancer legislation. Pub. Health Repts. 63:1128-1135, August 27, 1948, at 1128.

(3) Deibert, A.V.: A half century of state cancer legislation. Pub. Health Repts. 63:1128-1135, August 27, 1948.

(4) See note (3) at 1129.

(5) See note (3) at 1128.

(6) See note (3) at 1128.

(7) Lombard, H.L.: The Massachusetts Cancer Program: An Autobiographical Record. Boston, 1959. (bound mimeo)

(8) Rosenkrantz, B.G.: Public Health and the State. Cambridge, Harvard University Press, 1952.

(9) MacDonald, E.J.: A history of the Massachusetts Department of Public Health. Commonhealth 23:83-124, April/May/June, 1936.

(10) Seventy-five years of public health in Massachusetts. New Eng. J. Med. 232:241-247, March 1, 1945.

(11) Baker, M.C., Patterson, R.S.: 75th Anniversary of the Massachusetts Department of Public Health. Commonhealth, 1947. (special issue)

(12) Winslow, C.E.A.: A half century of the Massachusetts Public Health Association. Am. J. Pub. Health 30:325-35, April, 1940.

(13) See note (7) at 5.

(14) See note (7) at 5.

(15) See note (7) at 6.

(16) See note (7) at 6.

(17) See note (7) at 8.

(18) See note (7) at 10.

(19) See note (7) at 12.

(20) See note (7) at 14.

(21) Chapter 391 of the Acts of 1926, Commonwealth of Massachusetts, An Act to Promote the Prevention and Cure of Cancer and the Extension of Resources for its Care and Treatment.

(22) Lombard, H.L.: Twenty-six years of cancer control in Massachusetts. Pub. Health Repts. 68:7:647-655, July, 1953, at 648.

(23) See note (22).

(24) See note (22).

(25) Lombard, H.L., Doering, C.R.: Cancer studies in Massachusetts. I. The relationship between cancer and density of population in Massachusetts. Proc. Nat. Acad. Sc. 13:728-735, 1927.

(26) Lombard, H.L., Levin, M.L., Warren, S.: Multiple malignant growths. Cancer Res. 6:436-440, 1946.

(27) Potter, E.A., Tully, M.R.: The statistical approach to the cancer problem in Massachusetts. Am. J. Pub. Health 35:485-490, 1945.

(28) See note (22) at 654.

(29) See note (22) at 654.

(30) See note (22) at 654.

(31) See note (22) at 654.

(32) See note (22) at 650.

(33) See note (22) at 650.

(34) See note (22) at 650.

(35) See note (22) at 650.

(36) See note (22) at 650.

(37) See note (22) at 651.

(38) See note (22) at 651.

(39) See note (22) at 651.

(40) See note (22) at 652.

(41) See note (22) at 652.

(42) See note (22) at 652.

(43) See note (22) at 650.

(44) Cancer: A Manual for Practitioners. Boston, American Cancer Society, Massachusetts Division, 1940, 1950, 1956, 1968.

(45) See note (22) at 651.

(46) See note (22) at 651.

(47) See note (22) at 651.

(48) See note (22) at 654.

(49) See note (22) at 654.

(50) See note (22) at 654.

(51) Daland, E.M.: Pondville Hospital, 1927-1969. Walpole, Mass., Pondville Hospital, Massachusetts Department of Public Health, 1969(?).

(52) See note (22).

(53) See note (22) at 650.

(54) See note (22) at 650.

(55) Interview with Dr. Alfred Frechette, former Commissioner of Health, Commonwealth of Massachusetts, by Devra Breslow of HCCP, June 16, 1976, Boston, Mass.

(56) Interview with Dr. Harry Phillips, former Chief, Division of Cancer and Chronic Diseases, 1961-64, Massachusetts Department of Public Health, by Devra Breslow of HCCP, October 19, 1976, Miami Beach, Fla.

(57) Interview with Dr. Herbert Lombard, retired Chief, Division of Cancer and Chronic Diseases, 1926-59, Massachusetts Department of Public Health, by Lester and Devra Breslow of HCCP, June 18, 1976, Newton Centre, Mass.

(58) Data compiled retrospectively in June, 1976, by Miss Eileen Crimmins, Director, and staff, Division of Administration, Massachusetts Department of Public Health, Boston, Mass.

(59) See note (58).

(60) Interview with Dr. Leslie Lipworth, former Director, Massachusetts Tumor Registry, by Devra Breslow of HCCP, October 19, 1976, Miami Beach, Fla.

(61) Interview with Dr. Charles Neave, Deputy Director, Cancer Control Program, Sidney Farber Comprehensive Cancer Center, by Devra Breslow of HCCP, June 16, 1976, Boston, Mass.

(62) See note (61).

(63) See note (61).

(64) See note (61).

(65) California Medical Association: Cancer Commission Studies. San Francisco, California, Medical Association, a) reprinted from California and Western Medicine, 1932-34; b) J. W. Stacey, Inc., 1936; c) California Medical Association, 1950.

(66) Cancer Services and Facilities in the United States. Federal Security Agency, Public Health Service, National Cancer Institute of the National Institutes of Health. PHS Pub. #14. Washington, D.C., U.S. Govt. Printing Office, 1950, at 17.

(67) Interview with Dr. Lester Breslow, former Chief, Bureau of Chronic Diseases, State of California Department of Public Health, by Devra Breslow of HCCP, February 24, 1977, Los Angeles, Ca.

(68) See note (67).

(69) A Chronic Disease Program for California. Report of the California Chronic Disease Investigation. Sacramento, California State Department of Public Health, January, 1949.

(70) See note (67).

(71) See note (67).

(72) See note (67).

(73) See note (67).

(74) See note (67).

(75) Retrospective fiscal data, Cancer Control Contract Funds, compiled in August, 1976, for Devra Breslow of HCCP, by Lemar Hoaglin and staff, Cancer Epidemiology Unit, California Department of Health, Berkeley, Ca.

(76) See note (67).

(77) See note (67).

(78) See note (67).

(79) Interview with Dr. Eugene Miller, Medical Director, American Cancer Society, California Division, by Devra Breslow of HCCP, March 31, 1976, San Francisco, Ca.

(80) Cancer, Cancer Quackery and the Cancer Law. Berkeley, State Department of Health, California Cancer Advisory Council, 1972, at 64-74.

(81) Interview with Dr. Joseph Ross, Chairman, California Cancer Advisory Council, by Myrna Morganstern of HCCP, December 2, 1975, Los Angeles, Ca.

(82) Telephone interview with Dr. Sherwood Lawrence, Executive Director, California Cancer Advisory Council, by Myrna Morganstern of HCCP, December 19, 1975, Berkeley, Ca.

(83) See note (81).

(84) See note (80) at 84.

(85) See note (67).

(86) Interview with Dr. John R. Heller, former Director, National Cancer Institute, by Devra Breslow of HCCP, November 4, 1975, Bethesda, Md.

CHAPTER 10

ORGANIZED VOLUNTARY CANCER CONTROL PROGRAMS*

Introduction: One of Every Hundred Americans...

In the private, nongovernmental sector, organized cancer control programs have been dominated by one agency: the American Cancer Society (ACS). While other voluntary agencies and foundations, all far smaller in resources, have raised and dispensed funds for cancer research, only one--The Leukemia Society of America--has attempted to imitate the ASC programmatic approach. And The Leukemia Society's effort has been modest by comparison.

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* This chapter deals exclusively with the work of the American Cancer Society and its antecedent American Society for the Control of Cancer. The chapter does not purport to be a comprehensive history of the Society, but to highlight the characteristics of the Society's program, some of the major policy issues, and the Society's relationship with the National Cancer Institute and other public and nongovernmental agencies.

Although proposed several times in past years by individual Society Board members, no written history of the Society has ever been authorized. Several scholars have written about segments of the Society's program (Triolo & Shimkin, Cameron, Pack, Soper) (1) and at least one master's thesis, by Donald F. Shaughnessy (2) delved into some aspects of the Society's work.

The accumulation of selective reports may, in time, become an incentive for the Society to authorize an official, comprehensive history to be compiled.

Principal Researcher/Writer: Devra M. Breslow

Over the years, the American Cancer Society has evolved an ambitious, vital program that goes to the heart of cancer control: public and professional education, patient services, intramural and extramural research and fellowships. Its continued success in capturing some of the unexpended capital of Americans year after year has provided half a billion dollars of donated monies and at least an equal amount of in-kind contributed public service over the past 64 years.

The Society is regarded, quite correctly, as possibly the most powerful and pervasive voluntary health agency in the world. There is scarcely a hamlet in the nation where the familiar sword and caduceus symbol is not known. That trademark is particularly prominent each April, which was designated Cancer Control Month by presidential proclamation in 1938, the time each year when the Society's annual fundraising "Cancer Crusade" takes place.

The American Cancer Society--and its antecedent American Society for the Control of Cancer--has set the tone of cancer control first in the voluntary sector and then, by direct influence, in the governmental sector. While today one might quarrel with the Society's cautious activism, or conservatism, the Society cannot be faulted for its forthright accomplishment in making the American public aware of cancer and aware that by prevention and early detection, the toll from this dread disease can be reduced. The Society has been the major producer of educational materials enhancing public understanding of the disease and its management. The Society has also been a major force in securing vast federal appropriations for cancer

research, and, to a lesser extent, federal cancer control activities. The Society has been a formidable magnet: in its 64-year history, it has drawn upon the active participation of elected officials, professional and business scions, athletes, columnists and entertainers, not to mention thousands of health professionals and scientists.

More than one percent of the nation's population--over 2.5 million Americans--are current ACS volunteers. About 300,000 are discernibly active, engaged in committee assignments and service activities; the balance are enlisted, often year after year, for the short-term spring exercise of raising campaign funds and broadcasting ACS educational materials.

How did the American Cancer Society come to dominate the voluntary cancer control field--and the voluntary health agency movement itself? The answers lie in its origins, its continuity of volunteer leadership and management, its appeal to selected power-brokers, and perhaps in the product itself--elusive as cancer is--which may insure that the American Cancer Society will remain in business for a long time.

American Society for the Control of Cancer 1913-1945

In 1912, the American Gynecological Society met in Washington, D.C. They appointed a committee to conduct popular cancer education. An article by Samuel Hopkins Adams published in May 1913 by the Ladies' Home Journal was the first product. (3) On May 7, 1913, Metropolitan Life Insurance Company statistician Frederick Hoffman presented a paper, The Menace of Cancer, advancing 10 recommend-

ations for action against cancer before the same American Gynecological Society. He called for:

- organization of a society for the study and prevention of cancer
- a geographical cancer incidence study of the western hemisphere
- statistical investigation into the cancer experience of general and cancer hospitals, in particular follow-up of treated patients related to survival, recurrence, and death
- improved pathological reporting of cancer deaths
- correlation of institutional cancer deaths with place of residence to indicate true local cancer incidence
- a "thoroughly scientific investigation, through the cooperation of the Census Office, the Bureau of Labor, the Bureau of Mines, Life Insurance companies, etc.,...into the occupational incidence of cancer"
- nutritional studies of cancerous patients
- making cancer a reportable disease
- a study of cancer occurrence among domestic animals and plants
- "immediate preparation and widest dissemination of...accepted cancer facts," promoting surgical treatment. (4)

How prescient Hoffman was. The newly founded (1913) American Society for the Control of Cancer (ASCC) could not itself accomplish all of these commendable objectives, but the 15 East Coast physician-scientists and laymen did concur on these objectives: "to disseminate knowledge concerning the symptoms, treatment and prevention

of cancer, to investigate the conditions under which cancer is found, and to compile statistics in regard thereto...." (5)

First the Society set out to raise $10,000. The initial publicity release endorsing this action was through the American Medical Association. In 1914, the Metropolitan Life Insurance Company printed its own first pamphlet on cancer and distributed copies to policy holders. The ASCC itself produced one entitled "Facts About Cancer," which was mailed to 14,000 persons. The Society also adopted a resolution to admonish the Census to provide more complete and scientifically accurate analysis of deaths from cancers in the United States. In spite of the outbreak of World World I, the Society moved forward. Fund-raising was difficult, but memberships increased. Eleven states were identified as working on cancer control programs. In 1917, the Society melded some of its activities with the New York State Committee for Medical Preparedness. Six million bulletins on cancer were circulated by the National Safety Council to workmen in 1918. And syndicated columns appeared in the national press which included cancer as a topic. The Society embarked on its first professional education endeavor, preparing a 55-page pamphlet entitled "What We Know About Cancer: A Handbook for the Medical Profession," which was published in cooperation with the Council on Health and Public Instruction of the American Medical Association.

Since the power of radium in the treatment of cancer was by then widely accepted, two or three members of the ASCC volunteered to raise money to purchase one gram of radium, which was presented

to Madame Curie as a gift from the women of the United States by President Harding in May, 1921. The Society divided New York State into several districts and began its organization of state activities in the west and northwest. A large gift, $55,000, from the Harry Lasker Memorial Fund constituted the first endowment to the American Society. (This early involvement of the Lasker family gave no hint of the enormous influence which Mr. Lasker's son, Albert, and Albert's wife, Mrs. Mary Lasker, subsequently would have upon the Society.) By 1922, the ASCC had established 655 individual "cancer committees" throughout the United States. One year later, Dr. Howard C. Taylor, one of the founding gynecologists, became Acting President of the Society, and Dr. George A. Soper was appointed Managing Director. The Society had a small office staff and one Physician Field Representative. The ASCC, during this period, was governed by an Executive Committee of 20, elected from a far larger Advisory Council, and a five-person Board of Directors. The Council remained dominated by East coast physicians. Many large states also had state chairmen (always physicians) and volunteer committees. Both laymen and physicians served on local committees.

As part of its public educational responsibility, as early as 1921 the ASCC endorsed the AMA position of enjoining the use of "internal medicine, ointments, pastes, and superficial cauteries for treatment of cancer." This measure was the antecedent of a major ACS program thrust against cancer quackery which is persistent to this day.

Also in the 1920s, the Society produced its first motion picture, "The Reward of Courage." The first National Cancer Week was desig-

nated in 1921, largely through promotion of the ASCC. The Society concentrated on the establishment of cancer clinics in 1924, and within a year 15 were in operation, none further west than Minnesota.

1926 was a significant year for the ASCC. Twenty-six state committees were in operation. A plan was announced to gain a $1,000,000 endowment fund. John D. Rockefeller, Jr., contributed the first $125,000 of this endowment. But the most significant event was the International Symposium on Cancer Control held at Lake Mohonk, New York, from September 20-24, under the auspicies of the Society. This landmark symposium was attended by over 100 American and European surgeons, radiologists, and cancer research workers. Most of the papers were published as a supplement to Surgery, but the symposium had effects beyond the publication of its proceedings. The symposium was a meeting ground between two Massachusetts physicians, Shields Warren and Herbert Lombard, who would between them forge a remarkable cancer control program for Massachusetts. In the same year, 1926, the Massachusetts legislature embarked on its bold cancer control program (see Book two, Chapter 9).

As an outgrowth of the Mohonk conference, the ASCC authorized a two-year study, chaired by Dr. James Ewing, to determine the medical services available to American cancer patients. Ewing's committee recommended "close ties of collaboration between the cancer institutes [research, diagnostic and treatment centers] and the agencies of cancer control within its geographic territories." (6) Cancer institutes held the greatest promise for using limited private and governmental sources. In 1930, Ewing recommended that five or six such institutes be established: New York, Boston,

Washington, New Orleans, San Francisco, and Chicago. (The locales suggest not only the population distribution of the 1920s, but the provincial biases of the ASCC Board of that era.)

The timing for this enterprise was bad. The Depression had already set in. Although the ASCC in 1933 considered an "industrial plan for cancer control" [governmental financial incentives to foster and regulate cancer control] this was rejected as stifling to cancer research. "The study of cancer appears to be best served by the free play of personal expression and innovation...private and governmental patronage would be rendered to full advantage were it to catalyze the opportunities for discipline among research workers and unbiased benefactors." (7)

There were other dividends from the Mohonk symposium, but primarily it was a focal point for the Society to highlight the potential for cancer research--an area into which the Society would not make any substantial gains until it was reorganized in 1945.

In 1929, Clarence C. Little, Sc.D., was appointed Managing Director of the ASCC. In this year Madame Curie again visited the United States and funds collected by the ASCC sufficient to purchase a second gram of radium were presented to her by President Hoover. The major activity of the Society during this period remained public education. A booklet entitled "What Every Woman Should Know About Cancer " was prepared not only in English but translated into Jewish [Yiddish], Italian, Spanish, Polish, French, and Russian. Some 668,000 copies were distributed with the cooperation of the General Federation of Women's Clubs and other women's groups and the Metropolitan Life Insurance Company. (8) A second pamphlet, "The Danger Signals of Cancer," was published in 22 languages.

The first use of cartoon booklets was initiated in 1930. (9)

In spite of the Depression, the Society was able to expand its field service in 1931. Four doctors were engaged to survey cancer facilities in the nation and to enlist the cooperation of all state and county medical societies and health departments in furthering educational work. (10) In 1935, the Society copyrighted its sword caduceus symbol and the slogan "Fight Cancer With Knowledge." (11) In that same year, Dr. Little organized the Women's Field Army; its objective was that every women should know about cancer for her own protection. (12) Within a year, as many as 100,000 American women organized in local committees were identified as potential members of the Women's Field Army. The Army was popularized in articles by Dr. Little which appeared in Good Housekeeping and in the Hearst newspapers. The first Women's Field cell was in the state of New Hampshire. (13) The Society published a manual of the Women's Field Army, setting forth the means and methods of organization, and the Army presented its first exhibit at the 1936 Annual Meeting of the American Public Health Association in Atlantic City. (14) Momentum to build up the Army increased as public attention was aroused to the possibility that a National Cancer Institute was, in fact, going to be created by an act of Congress. In 1938, the Women's Field Army held its first National Assembly in Kansas City, Missouri. Mrs. Franklin D. Roosevelt was appointed Honorary Chairman. (15) The Field Army was composed of generally wealthy, certainly socially prominent women, active in volunteer service in their own communities, and it was upon this basis that Dr. Little was able to galvanize their interest. But at

this point women did not hold any policy-making positions on the ASCC Board of Directors. The Board was still dominated by physicians and prominent laymen, several of whom enthusiastically testified in 1937 on the efficacy of establishing a National Cancer Institute.

The first major reorganization of the ASCC actually occurred in 1936. At that time the Society established the ASCC Cancer Council, an "unprejudiced national body representative of the major groups in cancer." (16) The Council was to be a clearinghouse for information about cancer and would strive for integration and coordination of different activities including "interpretations of trends within various departments of oncology." (17)

A liaison was established between the ASCC's Cancer Council and the National Advisory Cancer Council created to advise the government with respect to cancer research and cancer control programs. This liaison established the pattern of relationship which is extant to this day between the American Cancer Society and the National Cancer Institute.

Since the Society was still primarily focusing on public education, in 1940, the ASCC established a solid collaboration with the National Association of Science Writers to carry information into the public media--chiefly newspapers and magazines. (18) That same year, the Society joined with the U.S. Public Health Service Cancer Control Program to produce a new motion picture for the lay public entitled "Choose to Live." (19)

Throughout the 1920s and 1930s, the annual resources of the Society probably averaged no more than $50,000 a year. It is alleged

that the Metropolitan Life Insurance Company actually provided much of that budget. (20) Other fundraising efforts were not substantial.

The advent of war colored some of the activities of the ASCC. The Women's Field Army of the New York City Committee made surgical dressings and bandages for the use of indigent cancer patients at home, distributed through local hospital social service departments. (21) This practice of rolling bandages persisted throughout the 1940s and 1950s and perhaps even into the 1960s in many parts of the United States under the auspices of the reorganized American Cancer Society.

In 1942, the Society again joined with the Public Health Service to produce a movie entitled "Enemy X" and held its first National Training School for the Women's Field Army. (22) A special committee was formed by members of the Apparel and Allied Industries to extend the ASCC educational program to workers in these industries. (This may be the first hint of educational programs by the Society directed at industrial workers.) By 1943, the Women's Field Army had enrolled 350,000 American women. Mrs. Harold D. Milligan was appointed National Commander. (23) In each state the Field Army engaged in different activities: the Michigan Field Army organized a Cancer Detection Clinic; the Louisiana Field Army contributed funds to purchase an electron microscope for the Charity Hospital in New Orleans, the only machine of this type in the South; the Alabama Field Army established the Drummond-Fraser Cancer Prevention Clinic in a large mill, another precedent; the Kentucky Field Army secured

from the state legislature a budget of $55,000 for cancer control work, including cancer clinics; the Rhode Island Field Army contributed $20,000 to endow one hospital bed for cancer patients; the Maine Field Army established a transportation service for hospitalized, indigent cancer patients; the Ohio Field Army financed a social worker in one hospital; the Indiana Field Army established a pathology fellowship and two scholarships for high school graduates to become medical technicians; the Colorado Field Army purchased 55 milligrams of radium for indigent cancer patients; and the New Hampshire Field Army provided fellowships for physicians associated with state diagnostic clinics. (24)

When the Society was reorganized substantially in 1944, several of these locally initiated activities were impregnated in the national program which evolved. The Field Army itself was abolished in 1951. Over the years, it came to be regarded as too independent and frequently unmanageable. The Field Army was unwelcome as the ACS evolved a national program that depended on policies developed by a national Board, totally dominated by men, a program in which research was an equal, if not superior objective alongside education and patient services.

It is obvious that cancer research, which would become a major plank of the Society's program and a major lure for enduring public contributions, was not considered a fundamental objective by Dr. Little. In the 1944 publication History of the American Society for the Control of Cancer, 1913-1943, the following summary expresses his views:

> Cancer is now being systematically attacked on four fronts: 1) The American Society (ASCC) and it local committees keep the public informed on the subject with their continuous educational propaganda. 2) Research is in the capable hands of the National Cancer Institute in Bethesda, Maryland, and of several other centers of experimental work. 3) Prevention clinics are accomplishing their purpose and are being studied with the aid of a grant from the Anna Fuller Fund. 4) There are facilities for the diagnosis and treatment of cancer, and in some locations indigent cancer patients are receiving proper attention and care. (25)

Dr. Little also noted there was a "fifth front," the care of advanced cancer patients of moderate means. Out of this need, a new organization, The National Foundation for the Care of Advanced Cancer Patients, was incorporated in May, 1944. Dr. Frank Adair, who would soon become President of reorganized American Cancer Society, and who had been intimately involved in the policy making of its antecedent organization, became a vice president of this new "fifth front" organization.

For Dr. Little, time was running out, however. He was a proponent of public education and believed in diffusing the Society's activities nationwide with only a light hand from national headquarters to channel local initiative. He succeeded in capitalizing on--perhaps even exploiting--the good intentions and energies of hundreds of thousands of American women, most of whom were middle-class, educated, and motivated to render volunteer public service. They became surrogate cancer educators, and, as their myriad activities suggest, they were responsive to locally perceived needs and at moving some state legislatures into action.

As the Second World War was drawing to a close, Dr. Little

was approached by a woman who possessed the same social class characteristics and motivations as a Field Army worker: Mrs. Mary Lasker, wife of advertising tycoon Albert Lasker. Mrs. Lasker's personal convictions about the cancer problem and how to attack it set in motion a profound Society reorganization and a synergistic relationship between the Society and the National Cancer Institute which have characterized the public-private frontier of cancer control ever since.

The Reorganization of the American Cancer Society, 1944-1946

In 1944, Mrs. Mary Lasker came to see Dr. C. C. Little upon the death of her cook from uterine cancer. She asked him what the American Society for the Control of Cancer was doing in research. He told her that nothing of any great substance in research was being supported. The major function of the Society was public education. Mrs. Lasker is reputed to have been infuriated that no single institution in the United States had as much as $500,000 for cancer research, an amount that "wouldn't even be suitable for an advertising campaign about a toothpaste." (26) Unable to capture her husband's direct interest, she was pacified when Lasker volunteered the services of Emerson Foote, another bright advertising man.

Foote assured Dr. Little that if the Society conducted an annual fundraising campaign, intelligently handled and comprehensive, it could in time receive at least $5,000,000. The Society's Executive Committee was requested to draw up plans for a 1944 massive campaign. Two factors contributed to the enormous success of this campaign, which raised $800,000. First Mrs. Lasker persuaded Lois Mattox Miller, an outstanding medical writer for the Reader's Digest, to

write several brief articles about cancer. The final sentence of each article asked that contributions be sent to the Society. About $120,000 of the 1944 campaign total was attributed to this tactic. The second factor was the mobilization of the Women's Field Army using advertising industry tactics. The Laskers paid half of the salary of experienced Lee Casey to direct the 1945 drive. Eric Johnston, then President of the United States Chamber of Commerce was chairman. $280,000 poured in.

There were conditions attached to the involvement of Mrs. Lasker and Mr. Foote, and Dr. Little recognized this. The first condition was that 25 percent of campaign funds was to be designated for research; the second was that one-half of the Society Board of Directors should be laymen. The physicians on the Board, called by some at that time an artistocratic and inbred organization, were rankled by the establishment of a Society research committee to which not one physician or scientist was appointed. To counter this move, Dr. C. P. Rhoades of Memorial Hospital requested that the National Research Council of the National Academy of Sciences appoint a Committee on Growth [tumor]. The Committee on Growth was to advise the Society on how its rapidly increasing funds should be allocated for research. Rhoades and Society's Board members Little, Murphy, and Morton, all physicians, were appointed to the Committee on Growth. The laymen on the Board declared this arrangement a conflict of interest and demanded that three resign from the Society Board. They refused. Dr. Frank Adair, a world-renowned breast surgeon at Memorial Hospital and one of the great arbitrators of the Society, persuaded these physicians to resign in the interest of cancer control.

The conversion of the Society into a more representative, less medically dominated body marked the end of the C. C. Little era. Dr. Little retired to the Jackson Laboratory in Bar Harbor, Maine, and was subsequently associated with the American Tobacco Institute. The Society adopted a new name--The American Cancer Society--and in 1946 embarked on three decades of staggering growth and influence in cancer control, jointly directed by physicians and laymen.

The Society then set its course along three avenues: research, education, and service. The administrative structure followed these lines: 1) Medical and scientific, including professional education and service, statistical research, and medical library; 2) field relationships, including public education, volunteer service to the cancer patient, recruitment and training of the volunteers, and fundraising; and 3) the national administrative program.

The second major reorganization of the Society set its national governing framework. The much-battled over bylaws provided for a Board of 56 members, half physicians or scientists and half laymen. The Executive Committee was enlarged to 19, of whom 9 were to be laymen. Four standing committees were designated: Medical and Science, Research, Finance, and Field Organization. To achieve balance between the warring factions, the bylaws stipulated that the Society President could only be a physician or scientist, and the Board Chairman had to be a layman. (Although a number of women have served on the Society Board of Directors in the last three decades, none has ever been nominated or elected either President or Chairman of the Board.)

The country was divided into seven regions. Each region contained Divisions, ususally on an individual state, each with two medical men and two laymen appointed by the National Society to organize locally. By the end of 1946, the Society had 59 Divisions in 48 states and the District of Columbia. Most Divisions represented entire states; in some instances a Division represented a metropolitan area within a state. To this day, although all Divisions operate under charters obtained from the National Society, they are separately incorporated under individual state laws. Each Division is charged with education, service, and fundraising activities. Sixty percent of all funds raised during a campaign remain in the Division's territory; the other 40 percent are sent directly to the national Society headquarters to underwrite the national research, education, and service program. (Several large states, California, Massachusetts, and New York, also dispense some research funds within their own Divisions.)

Under the Division is the unit, usually a county organization with great local flexibility. Units are governed in some instances by an Executive Committee composed of physicians, laymen, and Health Department representatives, and in others by Boards which more closely mimic the National Board of physicians and laymen. At the beginning of 1947, more than 2,500 Units, comprising over half a million volunteer workers was organized. (27) In 1976 there were 58 Divisions (over 3,400 volunteer members), approximately 3,100 units (over 64,000 members), and an unspecified number of branches below the unit level to serve neighborhood communities. (28)

In 1976, the Society's Board of Directors comprised 116 Division delegates, 2 from each; 34 proportional delegates on the basis of population; 42 delegates at large; 33 honorary life members; and 10 past officer directors of the Board. These 235 persons constitute the power behind the nationally determined policies of the American Cancer Society. The Board is arrayed in a group of functional committees to fulfill the Society's mission: Public Information, Field Services, Finance, Medical and Scientific, Research and Clinical Investigation, Public Education, and Crusade (fundraising). These committees and numerous other subcommittees and committees which do not have the force of "action" committees conduct the business of the Society. The blueprints for this structure were initiated in 1946.

The Women's Field Army, a network of modestly paid regional commanders, backed by thousands of volunteer workers, was an irritant. Charles Cameron discussed the Army's demise:

> During the war years, the Board was infiltrated by people who were determined that this organization was a "sleeping giant." I suppose it started with one individual, maybe Elmer Bobst, coming on the Board and saying, 'This has a great potential, let's get my friend, Mr. So-and-So, like Jim Adams...' They got one of their friends after another on the Board. They were all people of tremendous gusto and enthusiasm and style, and most of them had a good deal of influence.
>
> However...they had no sympathy for the Women's Field Army. They thought they were a lot of do-good amateurs....Remember, there were no professional writers, or anything else. This was all labor of love. (29)

Following a particularly boisterous national convention in 1946, the decision was made "high up" that the Army "would be eliminated as conveniently as possible. And it was." (30) It took five years

more to do so.

Out of deference to some of the women who had devoted most of their adult lives to the ACS, a few of the field commanders were given directorships on the Board, but their strength was gone.

Program Development of the Society 1946-76

The program of the Society, unlike that of the federal cancer control program, has remained structurally intact since the 1946 reorganization. There have been subtle changes--the addition of a new type of fellowship program, shifting emphasis and greater evaluation of the research grants program, and a new Division chartered in Puerto Rico--but the astonishing characteristic of the Society's program has been three decades of constancy.

This statement may give the illusion that the Society's program lacks dynamism, but the evidence belies any such impression, while the Society clings to its traditional mission--research, education, and service--its form of governance, with changing personalities on policy-making committees but stability of the national staff, has contributed to creative cancer control strategies. The overall assessment is that the Society has conducted its business with a minimum of dissension, friction, or disruption. Certainly, there have been no revolutions. While the federal cancer control program has been buffeted about, the Society has gone about its business in an orderly, systematic fashion, characterized by temperate activism. To be sure, the American Cancer Society is a business, accountable to the American public from whom it extracts increasing amounts of contributions each year. Prudent management has been a distinguishing hallmark.

Management

The active involvement of corporate executives, industrialists, and non-medical professionals at the national and Division policy-making levels has been salutary. Over the years, management training and advanced educational opportunities, uniform fringe benefits, and a variety of other incentives have created a coterie of Division executives for whom the Society is a highly competitive employer. Vertical mobility is encouraged in a nationwide system, although the typical pattern for a professional staff person is to progress from a Unit to an Area, then possibly to a Division office. A few ultimately gravitate to the national office. Mobility and stability are positive factors for a nonprofit agency that generally pays lower salaries than private enterprise.

As a result of the oversight provided by executive volunteers, a uniform accounting system was installed throughout the Society in recent years. This was no small feat to implement in an organization that functions in all 50 states and that scrupulously avoids doing business with any company or bank directed or owned by a Board member.

The counsel and will of the volunteers, many of whom direct massive corporations, are critical elements in any management policies initiated by the Executive staff. The Society has been directed by only two Executive Vice-Presidents since 1949; Mefford Runyon, who served after 10 years, and Lane W. Adams, who has occupied the position since October 1959. Runyon was previously President of Family

Counseling Service, a voluntary agency, and Executive Vice-President of Columbia Records. Adams was a bank executive in Salt Lake City who first joined the Society as a volunteer in 1946. He moved up the volunteer ranks rapidly, becoming national treasurer of the Society and serving on the NCI's National Advisory Cancer Council for two years, in one of the positions generally allocated to Society spokesmen.

When the position was offered to Adams in 1959, the Society's annual budget was $30 million. It has since grown to $120 million. Adams and a tight-knit executive staff around him, at least one of whom (Richard McGrail) has been with the Society since 1946, insure that the administrative and fundraising costs of the Society are kept low (never over 23 percent), the volunteers are well served without ostentation, and the image of the Society is impeccably preserved. Adams, a Mormon, firmly believes that "the more government becomes involved in health problems, there is a concomitant need for private citizens to participate. The vehicle of the private citizen is the voluntary health organization." (31)

A believer in the public-private mix to solve problems, Adams is readily available to medical and lay volunteers alike, without whose vitality, commitment, wealth, and concurrence the Society would be less influential. Of the upper middle-class himself, he is comfortable with, although always deferential to, volunteers, even those whose opinions he may not share. Adams' natural reserve coupled with superb management knowhow seem to inspire confidence.

Crusade

It is the ACS volunteers who raise money for the Society's operations. Until 1956, the total annual Society campaign receipts (exclusive of legacies) exceeded the annual appropriations of the National Cancer Institute. In 1945, the Society collected more than $4 million, while the NCI appropriation was $561,000. In 1956, the ACS collected over $27 million; the NCI appropriation was just under $25 million. During the next two decades, the Institute appropriations grew to nearly $1 billion annually (up from $200 million in 1971). But that growth has not stifled the Society's fundraising, which currently reaches about $85 million in annual campaign receipts and an additional $35 million in legacies, which are generally earmarked for cancer research. (In 1957, ACS embarked on totally independent fund-raising campaigns and withdrew from participation in Community Chest and United Funds. Independence has given the Society a more visible image, and, in most communities, wounds over this decision were healed rapidly.)

The annual "Cancer Crusade," as Adams indicates, is a "powerful force...an image in the fight against cancer...(which) has assumed dramatic and highly popular overtones for the Society." (32) Semanticists might argue that the term is a misnomer, for the Crusade against the foe, cancer, is neither militant nor spiritual, but eleemosynary and educational. Yet the term has become so ingrained in American parlance that it will not be abandoned. The Cancer Crusade successfully induces Americans to support the American Cancer Society, year after year. If the Society's research, education and service programs seem programmatically static, Crusade is just the

the opposite. The Society's volunteers and staff are ingenious at raising money. From cake sales and luaus to bike-a-thons, golf tournaments and art exhibits, there is scarcely an idea which has not been tried somewhere in the nation to complement the door-to-door and worker canvasing which are the stock-in-trade of fundraising. The proceeds can be nickles and dimes or large sums. On the eve of the October, 1976, ACS annual Board of Directors meeting, the New York City ACS chapter raised $85,000 in a single night, through a high-society benefit exhibit of the Louis Cartier jewels.

Special contributions are sought for special purposes, such as sending an ACS delegation to the USSR or underwriting advertisements supporting passage of the 1971 National Cancer Act. Among the Society's most devoted volunteers are a number of very wealthy individuals, including several women, who can be tapped for special interest projects. The Society is also able to extract from its non-medical professional volunteers endless amounts of talent and expertise and, occasionally, equipment as lavish as a computer. Public service radio and television spots are created by volunteers who donate their skills and that of their agencies, sometimes at considerable business and personal cost. (One small advertising agency executive divulged that the ACS's stand on cigarette smoking may, in fact, have deterred some potential clients.) (33)

In the last 15 years, the Legacy Program has grown exponentially. In some communities, the local ACS Unit invites bank trust officers and estate-planning attorneys to a luncheon, at which the Society's objectives and self-evaluation are expressed. This strategy is later

translated into bequests by their clients. The soft-sell strategy is subtle--and it works. The Society now budgets with an expected $25-30 million annually in legacies. Possible the largest single legacy ever given to the Society was the Macomber legacy, a $6 million bequest made by a Southern Californian. The gift was secured fortuitously through the responsiveness of one sensitive ACS volunteer to the interests of a dying man in making his wealth go a long way toward thwarting the disease which was killing him. Emotion does play a part in many ACS legacies, and the ACS is the major establishment recipient of "cancer" bequests.

Why do people continue to give to the Society and make substantial bequests? Persons who are cautious about their charitable contributions and investigate the Society learn that, historically, less than 20 percent of Society revenues are expanded on fundraising and administrative costs, despite the fact that the Society maintains Division offices and staff in 58 locations, thousands of Unit offices, and a national staff which, for the first time in decades, is presently housed in spacious, but unpretentious quarters in New York City.

A large proportion of Society givers are big givers: over $1,000 a year. They are people whom Cameron has characterized as "congenitally or by experience mistrustful of big government moves... They are always going to look at the Cancer Society as 'my voluntary agency.' They pay taxes by force. But they feel good about giving it to the voluntary agency." (34)

As with most voluntary health agencies, the Society relies on this type of volunteer--and rewards some of those donors, who are

also active on committees, with decision-making privileges. Money cannot buy autocracy in the Society, but very generous donors, many of them conservative in their political and social outlook, find their views can and do influence the direction of the organization.

Public Information

To keep the name of the American Cancer Society in front of the public, the Society devotes a good deal of its volunteer resources to public informational activities. Professional staff guidance is provided, especially with respect to content, themes, and media relations.

National celebrities--athletes, statesmen, entertainers--have been expertly deployed. Since the 1940s, the Honorary Crusade Chairman is the President of the United States; the actual Crusade Chairman is invariably an individual whose image is popular. Some celebrities who have survived cancer such as Arthur Godfrey and William Gargan have become willing ACS spokesmen, even, as in the case of Babe Didrikson Zaharias, for a few years of remaining life. The annual ACS Facts & Figures report always lists celebrated persons who died of cancer in the past year--further documenting the ubiquitous nature of the disease. Cancer News, the ACS volunteer quarterly, routinely reports on celebrities who have successfully fought cancer.

What ACS public information has accomplished is to make cancer a familiar word in the lexicon of ordinary citizens. People discuss cancer on the radio, on television, at work and recreation. Largely due to the Society's persistent and pervasive public information

efforts, cancer has "come out of the closet." The Society, its creative volunteers and staff, have worked closely with the media to develop materials which reflect the changing mores Americans have about discussing sex and genital organs. "The cancer nobody talks about (colon)" and other topics have, over time, become less taboo. By 1970, hard-hitting ads could state: "Little girl, when sex becomes a part of your life, you ought to have a Pap test." Several years later, a human breast could be shown and discussed on television.

Although concerned with cancer quackery--more so than any other voluntary or governmental agency--the Society does not indict quackery in its public information program. Rather, the positive aspects of early detection and self-interest in good health are promoted through themes such as "Fight cancer with a check-up and a check."

One of the most effective public information techniques has been to hold an annual Science Writers' Seminar in late March just before Crusade is launched. About 30 American scientists in basic and clinical cancer research are invited to present papers in layman's terms to perhaps as many as 75 members of the broadcast and print media, who are invited as Society guests. Across the nation, in every major newspaper and in small-town papers which subscribe to wire services, on television and radio, cascades a steady flood of stories about new research findings related to cancer, new opportunities for hope, new technologies. This heightened awareness sets the American public up for the Crusade which ensues. The Seminars, initiated in 1959 by ACS science writer Pat McGrady, Sr., grew out

of an earlier concept, initiated in 1952, whereby a small group of practicing science writers were taken on a nationwide tour of major cancer research institutions. As science writing became more creditable and cancer research--much of it supported by the ACS itself--was diffused throughout American universities, the Seminar notion took hold.

The Society's Science Writers' Seminar has been so successful in stimulating public awareness and contributions that it has been imitated by the American Heart Association and several other voluntary health agencies.

In mounting its public information and public educational activities, the Society has worked closely with the Advertising Council of America, seeking approval for various announcements or advertisements which it proposes to display at no cost to the Society. In the print media, space is either contributed by the medium itself, a magazine or newspaper, or paid for by a local donor secured by the local Unit or Division. Public service spots on television and radio, especially over networks, are negotiated by the national office and, at the local level, through Division offices. Through the organized public information activities at the national office, the Society is able to respond rapidly to news about cancer research, to capitalize on individuals who actually have cancer and who would be suitable spokesmen for the Society in its fund-raising and educational efforts, and to monitor closely the attitudes of the American people toward cancer and cancer control.

While public information and public education may seem indistinguishable, they are administratively directed as separate, interlocking activities of the Society, each requiring expertise at National and Division levels. And a large number of volunteers are especially adroit at promoting the Society through all known avenues of influence. Beginning with Albert Lasker and Emerson Foote, the Society has succeeded in retaining active volunteers from advertising, the media, and the nation's advertisers.

Management, Crusade, and Public Information are the underpinnings of the Society's program, without which no direct services could be provided. The Society is audited by the National Information Bureau on Charitable Organizations periodically, as are many American voluntary health agencies. The only flaw in an otherwise laudable performance, reported at the 1976 Board meeting, was the possibly misleading statement that the Society publicly claims it approves far more research proposals than it has funds to support. The Bureau recommended that the Society should stress instead that insufficient funds penalize the total ACS Cancer Control program--not just its grants-in-aid research component. (35)

Research and Training *

The stipulation of Mrs. Lasker and Mr. Foote in 1944, that 25 percent of Society campaign funds were to support research, set in motion a pattern which has given basic and clinical scientists

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* The definition of cancer control adopted by the American Cancer Society in the 1944-46 reorganization encompassed support of extramural research and training. As much as 35 percent of ACS annual

at least one other grant funding source than the federal government for investigator-initiated grants subject to peer review. Further, the steady increase in NCI appropriations, which are expended largely for research, are in no small way a tribute to the American Cancer Society, which, since 1944, has consistently testified openly for these increased appropriations. Just as it was inconceivable to Mrs. Lasker that the ACS was not committing monies to cancer research, it was equally incongruous to her that the federal government did not commit vastly greater resources to cancer research.

The laymen...conceived the research program and...engineered its monitoring. (37) To set the course of research to be sponsored by the ACS, the Committee on Growth of the National Research Council (National Academy of Sciences) was appointed in June, 1945, to eliminate duplication and waste in cancer research: Panels of experts were appointed to guide the Society in these areas:

. basic and clinical investigations to uncover essential new information not only in cancer but the phenomena of growth

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contributions and legacies are currently committed to these purposes. When a number of long-time ACS Board volunteers and ASC executive staff were asked if this proportion was appropriate, given the increased level of federal funds since 1971 devoted to these purposes, they were almost unanimous in their opinion: ACS research and training programs provide alternatives for applicant scientists; the ACS is more innovative in its research support than the NCI; without a visible commitment to underwriting research into cancer's causes many ACS leaders believe the American public would not be as motivated or generous to the Society. It is the research and training programs which have compelling repeated appeal to donors, not ACS's educational or patient services. (36) Given the Society's overwhelming commitment to research and training support, highlights of these activities are discussed in this section.

. fellowships

. strategies for the ultimate assault on human cancer.

Nearly 100 eminent American scientists met periodically in the next year. Arrayed in 19 panels covering such diverse fields as enzyme chemistry, botany, and isotopes, they became the Society's major research program advisors. Several enduring activities emerged from this historic exercise, focused particularly on training.

In 1948, the Clinical Fellowship program was established. Among the first recipients were Joseph H. Burchenal, who has since had a memorable career at Memorial Sloan-Kettering, and Timothy R. Talbot, Jr., Director of the Fox Chase Comprehensive Cancer Center in Philadelphia. Hundreds of clinical scientists have received ACS Clinical Fellowships, contributing to the pool of able clinical cancer researchers and clinicians. More than $1 million a year is invested in this program, which still flourishes today.

From 1948, several fellowships in cancer epidemiology were awarded to Yale University, but it is not known how long this $15,000 annual support lasted, or with what results.

In 1956, the first Research Lifetime Professorships were authorized. Eight hundred thousand dollars a year was set aside for the lifetime support of new faculty physicians in medical schools, to be occupied by outstanding, productive scientists. The host institutions were responsible for underwriting the facilities, while the ACS fellowship paid a sizeable portion of the salary. In the past 20 years, over 30 such Research Lifetime Professorships have been awarded. At least two were given to men who ultimately

won the Nobel Prize: Dr. Charles Huggins and Dr. Robert Holley.

In 1961, the Eleanor Roosevelt Cancer Foundation became affiliated with the Society, and an international fellowship program was inaugurated, which, in recent years, has been administered by the International Union Against Cancer. Fellowships are granted for scientists to visit cancer research institutions in developed nations.

By 1963, the armada of scholarships and fellowships maintained by the Society included the following: Research Professorships; Scholar and Faculty Research Associates; The Eleanor Roosevelt International Fellowships; Predoctoral Research Scholarships; Postdoctoral Grants; and Postdoctoral Research Scholarships. In that year, 272 of 458 applicants actually received clinical fellowships, selected by rigorous criteria enforced by ACS medical and scientific review committees.

In 1971, to promote specialized oncology expertise in medical schools, an ACS professor of Clinical Oncology program began. Through this program, a clinical oncologist can be recruited and sustained for five years, freed of administrative responsibilities in order to direct his energies to clinical management and research. ACS Divisions contribute these funds, $25,000 per recipient per year. So far, about 15 such clinical oncologists have been selected and are affiliated with some of the nation's most prestigious medical schools.

In response to the recommendations of the Committee on Growth, the ACS embarked on an ambitious and remarkable grants research program. Beginning in 1946, the Society's research program had available

a minimum of $1,000,000 a year. By 1956, $8,000,000 was available; by 1966, $12,000,000, and in 1976, $35,000.000

The committees, which review grant applications for the Society at least three times a year, are composed of illustrious, competent scientists in their respective fields. Many of these scientists and physicians also sit on the Study Sections of the NCI. Their service to the Society is a contribution; their service to the NCI is modestly recompensed. Members of these review committees rotate as they do on NCI committees over the past 30 years; the Society has established an extraordinary track record in underwriting worthy projects which ultimately have led to more substantive findings and more substantial funding, often by governmental sources, and an enormous expansion of our practical knowledge about cancer--its etiology, its management, and means to manipulate the carcinogenic process. Research grants are not made to individuals but to institutions of higher learning. Most project grants are made for two years and are renewable for a period of one year.

The Society, since late 1947, has also awarded institutional grants. By not restricting funds to an individual project, it was expected that cancer activities would flourish in new fields and fresh thinking might be stimulated. The institutional grant could be devoted to basic or applied cancer research; it could be spent for salaries, equipment, supplies, and even administrative support. In 1950, more than $10,000,000 had been awarded in institutional grants, 44 percent of all ACS research allocations in that year. A 1951 institutional grant policy Advisory Committee recommended that the

Society not limit these awards to institutions which were affiliated with medical schools and hospitals. In 1953, this research program was modified again. The Institutional Research Grant was established, designed to support special coordinated programs, instrumental development, and other special efforts not provided for by other aspects of the Society's research program. (38)

Unlike the NCI, with the exception of its intramural epidemiological and statistical program, the Society has not operated any research or clinical facilities, nor given funds for construction. Consistently, the Society receives many more research grant applications than it approves or can actually fund. Many applicants, of course, apply both to the ACS and to governmental or other private sources.

The Society tends to take more chances than NCI in underwriting lesser known promising investigators. The review process seems as stringent as NCI's, but the volume of applications and individual level of funding are both far smaller. ACS grants are often vital "start-up" awards for which larger federal support is forthcoming.

The Committee on Growth was disbanded in 1959 after 12 years of service. Instead the Society developed a scientific advisory council and a network of typical advisory committees to assess grants-in-aid. Charles Cameron, Medical Director of the Society from 1946-56, "rather regretted" the decision to relegate peer review to Society volunteers, although most of those performing this function were able and did the same job for the National Institutes of Health "that was proven successful," he said two decades later, and "therefore,

it must be good." (39) Nobel Laureate Wendell Stanley, leader of the ACS research committee at that time, referred to the 116 individual volunteers drafted to serve at research committees as "the cream of the scientific talent of the nation." (40)

In general, the Society has supported fundamental research, for which federal monies were less available, and has been inclined to leave clinical application of research to the National Cancer Institute.* While the Society, in 1961, supported Dr. Charles Heidelberger's research to synthesize the drug 5-FU,** it has not supported clinical trials which compare various chemotherapeutic agents. Contrary to Mrs. Lasker's view, the Society has left clinical trials to the NCI. With respect to supporting chemotherapeutic development and evaluation, Cameron has said:

> The American Cancer Society's role in the whole chemotherapy development is not one of its singular accomplishments. I think that...[is] where the Society felt it was improper to exercise judgments as to where the emphasis should be. There was some reluctance of the Society to influence the direction of research...that was more or less a policy of the National Cancer Institute, also, until recently. (43)

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* In 1949, 26 percent of research grants were made in biochemistry, 26 percent for biological studies, 23 percent for clinical investigations, 12 percent for the chemotherapeutic developments, 11 percent for biophysics. (41)

** Because of its support to Dr. Heidelberger, it is commonly believed by even some ACS Board members that the Society derives continuing royalties from patent rights on 5-FU. The Society did hold a one-quarter patent right to such royalties, along with equal holdings by Dr. Heidelberger, the University of Wisconsin, and the National Institutes of Health. Following an audit, a minor bookkeeping error was noted which would have given all royalties to NIH. Neither the Society, nor the University of Wisconsin, nor Dr. Heidelberger have ever received one cent of royalties. (42)

In 1969, in response to public criticism that the ACS was less supportive of applied than basic research, two new ACS committees were established: Clinical Investigations Advisory Committee and Clinical Investigations Review Committee. They review proposals for projects in cancer prevention, diagnosis, and management.

At that time the NCI was allocating about $72.5 million for cancer research fellowships and training. The ACS total income in 1968 was about $60 million, of which $20 million was being allocated for research grants. As much as $2 million had been allocated to a single individual, Dr. Charles Huggins, Nobel Laureate in 1966, for his work on hormone therapy in treating cancers of the breast and prostate. Dr. George Papanicolaou had received about $800,000 from the ACS to support his research--an extension of exfoliative cytologic research to other cancer sites--and for a life-time salary.

The Society's 1965 self-critical report* was bleak. The cancer cure rate was the same as in 1955, about one in three cancer patients surviving five years or more after treatment by surgery or radiation. The Shope Report urged: That the Society should assume a more positive role in achieving its research objectives, taking the initiative in choosing research undertakings, and for planning and supporting

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* The report is known as the ACS Survey Committee Report. Dr. Richard Shope, who was then a Rockefeller University professor and renowned cancer researcher, chaired the ACS survey Committee.

their development; should direct attention to the major unsolved problems of human cancer, both at the clinical and basic research levels; should launch a new program of strategic research focused on specific objectives; and that greater emphasis should be placed on the unsolved clinical problems of cancer. Shope's confidential report, written shortly before he died of cancer, said in part:

> The program is deficient because it fails to support research in a number of important areas, also because even in areas where support appears reasonably adequate, the nature of the research supported is either not sufficiently oriented to the human cancer patient or it leans toward obtaining more or less obvious answers. (44)

Without singling out the Society, Shope asserted the heart of the problem was the "passive" manner in which large granting agencies in medical research traditionally made awards. "There is no discipline," he wrote. "No strategy, no tactics." He called for "intelligent direction and leadership...to assure that we hue to the line of fixing our objectives of solving human cancer problems more closely than in the past." (45)

Shope's personal report and the Survey Committee Report were synonymous in their conclusions: A systematic approach to cancer research was imperative. The ACS Board, on October 20, 1966, voted to reorganize the Society's research program and to develop research strategies for a focused attack on key research objectives. The Research grants program was retained; the Epidemiology and Statistics

Unit was transferred into the Research Department, and, most important, a new functional unit, the Department of Research Analysis and Projection, was established to search out significant leads which have been inadequately pursued and proceed to implement their exploitation.* The unit was to strive to enhance the development of new insights and new lines of inquiry in critical areas where progress has been slow or has come to a standstill entirely. The Society, in what writer Bernard Glemser calls "a gesture deserving of commendation for courage and public responsibility," then distributed a 60-page booklet entitled "New Directions in Cancer Research," reporting the events leading to the reorganization of its research program. Only the main body of the Shope Report, withheld because of its confidential nature, was omitted. (46)

It is noteworthy that since the Shope Report and greater concentration on "targetted" research, the ACS now devotes more of its research awards to environmental carcinogenesis, a field relatively ignored in its research grant allocations prior to 1966.

For many years, the ACS was directed by the individual serving as Medical Director or Vice President for Medical Affairs. Following the Shope Report, Dr. Richard Mason directed only the Research Department. From 1970 to late 1976, medical affairs and research were again combined, directed by Dr. Arthur I Holleb. Reflecting

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* A prestigious panel formed the first council for analysis and projection: Dr. George Klein of the Karolinska Institute, Stockholm; Renato Dulbecco, Salk Institute; Colin McLeod, Commonwealth Fund; and academic scientists A. Gellhorn, W. Burdette and H. Engle.

the symbiotic relationship between the ACS and the NCI, the ACS persuaded Dr. Frank J. Rauscher, the highest ranking cancer administrator in the world, to leave the NCI, where he had been Director since 1972, and to join the Society as Senior Vice President for Research. This move and the installation of a virologist--a basic scientist also sensitized to the value of cancer control--should even more boldly strengthen the ACS's combined view of cancer research and control.

Lane Adams predicts that under Dr. Rauscher's guidance, the Society will move away from so much concentration on investigator-initiated grants toward focused "touchy areas." Target research will be "easier to sell with Rauscher's background." (47) Adams acknowledged that the Society, in its research grant program, may have been too imitative of government--a safe, conservative position. He believes that the Research Committee will respond favorably to proposals placing more ACS support into clinical research, as Mrs. Lasker and some others have recommended. (48)

Although there has never been an attempt by the Society to establish its own basic or clinical research laboratories, the Society did establish firmly an Epidemiological and Statistical Research Unit. This was also an outgrowth of the original National Research Council's Committee on Growth. The Unit has been directed since 1950 by E. Cuyler Hammond, Sc.D.

One of the early notable achievements of this Unit was the compilation of a manual of tumor nomenclature and coding, the standard "Bible" of registry management, insuring uniform and comparative epidemiological analysis. This is the standard manual used

by all American tumor registries; it has been adopted by the World Health Organization; and it has been translated into at least six or more languages. The Unit also compiles ASC Facts and figures, annual projections of cancer incidence by site and locale. In 1947, the Unit studied cancer death rates by states. The results proved a long suspected paradox: the better the standards of medical care, the higher the cancer death rate. (49) One year later, the Society joined with the USPHS to stage a conference on uniform reporting of state cancer registry data.

Two landmark gigantic epidemiological prospective studies were mounted by the Epidemiological and Statistical Research Unit. In 1951, under Dr. Hammond's direction, the Society engaged in a prospective study of the smoking habits of 187,766 men in nine states. The interviewing was accomplished by 22,000 trained ACS volunteers, working over a period of four years (The Society comments that if the interviewers had been paid, the costs would have been in the million of dollars.) This survey reinforced the marked relationship between cigarette smoking and the development of lung cancer and heart disease.

The impact of this huge mass of data has been felt all over the world. Public Health leaders in the United States, Great Britain, Sweden, Holland, Norway, Italy, and other countries, were prompted to speak out against the risks of cigarette smoking; and in many countries laws have been passed to control various aspects of smoking. But, as Dr. Hammond would learn, revealing the evidence

would not necessarily lead the Society into dramatic actions as a consequence. (See Tobacco and Cancer)

In 1959, the Society launched the Cancer Prevention Study. Sixty-eight thousand volunteer interviewers persuaded more than one million U.S. adults over the age of 30 to complete extensive, confidential questionnaires. Important scientific information was obtained from data gathered during the first six years of follow-up, including relationships between lung cancer and smoking in women, the effects of air pollution, and risk factors in breast and cervical cancer, as well as in coronary heart disease and stroke. As former columnist Earl Ubell said, "The numbers flowed from the ACS's electronic computer in New York faster than cigarettes from a factory... It was quite clear. The statistics had drawn a web of logic more tightly than ever around cigarette smoking as a destroyer of men." (50) This study, which also would have cost millions of dollars and it been performed without the services of volunteers, lapsed in 1965. It wasn't until 1971 that the Society refinanced it to explore additional factors in relation to cancer.

That same year, Dr. Hammond, in collaboration with the Environmental Sciences Laboratory of Mt. Sinai Hospital in New York City, began investigating possible cancer hazards in a number of occupational groups exposed to hazardous chemicals and in cities where drinking water had been contaminated by asbestos and other known carcinogens. Hammond had previously, in 1967, begun studies of the effects of asbestos on exposed workers. Since that time, the ACS has invested $2,000,000 a year for these joint studies supervised by

Dr. Hammond and Dr. Irving Selikoff of Mt. Sinai Hospital.

As to why the Society did not venture into occupational cancer epidemiological studies earlier, Dr. Hammond attributes it to the concentrated focus of his small staff. They pursued in depth etiological and epidemiological studies of lung and breast cancer, major killers of Americans. Initially, the occupational link was not perceived by him, he admits. Further, Hammond didn't believe in empire-building, so that the Society's intramural research program has been constrained. (51) The intramural staff provides consultation to Divisions and Units throughout the Society, and, theoretically, to its own national staff as needed.

The current major concentration of Hammond himself is a series of occupational cancer studies. Asbestos workers in New Jersey and Duluth; vinyl chloride workers; members of the Printing Pressman's Union who are exposed to chromates and aniline dyes, carbon dust, and ink; the Haskell labs of Dupont Chemical Corporation are being followed closely. Drs. Selikoff and Hammond, in Hammond's estimation, are welcomed by various industries which are being pressured by the Environmental Protection Agency to clean up their plants because they have a reputation of not trying to "kill" industry as Dr. Wilhelm Hueper was alleged to have been doing. (52) The current studies are attractive, Hammond believes, because some good will benefit workers of today and tomorrow, and, scientifically, they provide the only possibility of studying the multifactorial etiology of cancer. (53)

The educational and service aspects of the Society's program, which have not been provided to a large extent under federal auspices, and for which the Society must be acknowledged as preeminent, nonetheless lack the magnetic appeal of the ACS research and training programs. The dividends are long-term, not immediately perceived --but it is these activities which sustain public confidence and philanthropy.

According to Dr. Lowell Coggeshall, retired medical educator and a former ACS president:

> One of the significant accomplishments of the Society in the past 30 years has been the acquisition of some of the best minds in oncology research...The ACS was a forerunner of the NCI... Not only did the Society act as catalyst for federal cancer appropriations, but was active in promoting some technological advances that made the field ripe for federal program investments... The ACS pattern of using study sections to allocate research funds was imitated by the NIH biomedical establishment.
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> The ACS and NCI research programs have been complementary, not competitive. The Society further dignified cancer research by publications, exposure in the media, holding scientific forums, and making the public and professions aware. It was an unconscious uplifting of cancer researchers. (54)

In a period when federal support for molecular and viral research has fluctuated, Dr. Coggeshall praised the Society's consistent attention to basic biological research: "It truly took up the slack. (55)

Public Education

"We considered the primal function of the Society to be public

education," Charles Cameron has said reflectively. (56) And, although considerable publicity is given to the dividends of its research support and the power of research to peck away at the cancer problem, the public educational program of the Society is the oldest and most visible of its activities. "The annual campaign is in itself the greatest contribution that can be made to cancer education," former ACS President Dr. Frank Adair said,"The campaigns...have done more to awaken and educate possible cancer victims than could have been done through any other means." (57)

Unquestionably, the annual campaign in April is an intensive public education effort, but that activity goes on every day, particularly at the Division and local Unit level, in schools, clubs industries, governmental agencies, and in the Society's adroit use of the media to carry its message across the land. Priorities have been historically set at the national level. Most educational materials are developed by the national office, engaging volunteer educational advisory committees; actual production services are purchased and occasionally donated; ACS Divisions then purchase the materials generated: films, brochures, teaching kits, etc.

An overriding theme of ACS public education is that early detection of cancer can save lives and reduce morbidity. As early as 1948, a public survey was conducted by the University of Michigan which disclosed that the public simply didn't recognize the seven danger signals of cancer despite years of propagation. Based on this survey, a lay education program was mobilized to be conducted by local Units. Cancer program kits were organized for groups such

as women's clubs, industry, church groups, fraternal organizations, and schools. A pamphlet called "What Most People Don't Know About Cancer" was produced and published in five languages (English, Polish, Italian, Spanish and Yiddish). (58) In that formative year, 1250 prints of cancer films were distributed, 10,000 radio scripts were distributed to U.S. radio stations, and 10,000 advertising mats and 28,000 clip sheets were sent to newspapers and magazines. (59) The goal was to reach 75 million U.S. citizens through agricultural, fraternal and service organizations, employee groups in unions and government, and veterans, management and trade organizations. By 1950, 11 million pieces of public education materials had been produced and sold at cost to Society Divisions and Units. (60)

Education of industrial workers began in 1950 and has been sustained since, in major and minor industrial plants around the country. It is conducted by volunteers who arrange film showings, management personnel training sessions, and who arrange for articles to appear in house organs. In 1956, some form of cancer facts was distributed to 3½ million employees of 26,000 U.S. firms. (61) The AFL-CIO participates in ACS industrial programs.

The Society had its own regular radio program for several years, beginning in 1948, and several years later began exploiting television.

Divisions and Units also have the privilege of allocating some resources to developing indigenous materials, and many innovative activities in public education have actually been developed at the local level. After pilot trials, they are assessed by the national Public

Education Committee, which may recommend incorporation into the national program. Among the themes promoted through public education in the last 30 years have been:

- the seven danger signals of cancer *
- every doctor's office a cancer detection center
- cancer--the problem of early diagnosis
- early detection of silent cancers
- the importance of breast self-examination
- the importance of semi-annual chest X-rays for men over 45 who have been heavy cigarette smokers

Periodic opinion research surveys have been conducted for the Society by the Gallup Poll and other firms. In 1956, a survey conducted by Chester Williams and Associates revealed that the Society had countered the ancient fear of cancer with free and frank discussion. Public consciousness had been aroused. It was recommended that the Society needed to reach those in greatest need (e.g., persons of low income, limited education, the elderly, and ethnic minorities) and that the physician as teacher should be stressed in advocating creative attitudes toward health and especially cancer. Stimulating interest in biological scientific careers was proposed. (63) And considerable resources of the Society's public

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* Dr. Charles Cameron said, "I became disenchanted with the seven danger signals, because they are not early signs of cancer, they're late. And that's why I think they've never made much of an impression on the death rate." (62)

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education program have been expended on the school-age population with some measurable impact. (64) The teenage audience has been a steady target for campaigns against cigarette smoking since the 1950s, for learning breast self-examination, and for cancer alertness in general. In developing and evaluating materials, the Public Education Department draws on professional educational and evaluation consultants and health educators who sit on the Public Education Committee. A 1966 market research report by Lieberman Research, anticipating Medicare, led the Society into producing 24 new films and 4 pilot programs aimed at improving nursing home care. Yet, Lieberman pointed out, 31 percent of those 2,000 sampled did not know the seven danger signals. Ninety percent said they would have annual check-ups--if advised by a physician. (65)

Since 1946, public education activities have consumed from 12-17 percent of annual revenues. (66) Beginning in 1956, the cancer risk from cigarette smoking became an absorbing theme. In that year, in addition to films and pamphlets on the subject, the public was bombarded with articles in national magazines, over radio and television, and on billboards. Dr. Charles Cameron's book, The Truth About Cancer, (67) was published with syndication of individual chapters in 27 American newspapers having an alleged readership of 40 million. The book has been translated into many languages and the Society receives all royalties from the hardbound and subsequent paperback edition. The Society also benefited from publication of Dr. Harold Diehl's book, Tobacco and Your Health: The Smoking Controversy. (68) Subsequent anti-smoking campaigns in several

languages even explored comic books as a medium.

There is relatively little information in the published scientific literature about the Society's public education effort. Nonetheless, it is generally accepted by educators and health professionals that the information is well conceived, widely disseminated, regularly evaluated and indispensible. The Society has engaged in a steady, well-financed, imaginative public education effort far exceeding anything the federal cancer control programs have ever done--with the general acquiescence of the federal program leaders, in fact. The Society can command expertise in the development and distribution of its materials, much of them using national print and broadcast media, and even more directly distributed by millions of volunteers.

Public education has, in fact, been a major avenue for the Society's posture on cigarette smoking, especially in dissemination of materials for teachers. This activity will be intensified in the "Target Five" campaign being launched in 1977, because, in spite of what the Society (and other voluntary agencies) have attempted to accomplish in the last 20 years, teenage cigarette smoking has never been higher.

Recognizing that health education was important to cancer prevention, the Medical and Scientific Executive Committee in 1948 recommended that the Society invest in health education fellowships. (69) The proposal did not pass the Board of Directors, however.

Professional Education

The need to engage in professional education was recognized early by the Society. As Dr. Charles Cameron wrote in 1958:

> Over the years, money, vision, imagination, and ingenuity catalyzed one another to broaden the interest and the operations of the Society. Experience shows that education of the public alone was not enough to create the optimum environment for cancer control. Heightened public awareness would make increased demands on clinical services...In due course, it appeared that public education was increasing cancer consciousness among laymen faster than physicians were adjusting to seeing smaller tumors than they were accustomed to... Diagnosis became more difficult for doctors--a situation which appeared to call for sensitization of the practicing physician, and in particular the general practitioner, to the growing importance of cancer in his diagnostic considerations. (70)

Cameron's understanding set the tone and focus of the ACS professional education program. As with the NCI, the Society concentrated on the primary medical practitioner. In the ensuing 30 years, a comprehensive program of professional education has evolved: motion picture films, televised clinics and seminars, self-instructional audiovisual kits on diagnosis and treatment of various organ sites, popular and scientific periodicals, monographs, manuals, culminating in fellowship grants for formal short-term postgraduate training.

The framework of the Professional Education Department was established during Cameron's tenure, 1946-56. The periodical Ca--a bulletin of cancer progress (renamed in recent years Ca-- a cancer journal for clinicians) began publication in 1950. It is a compact, well-written, and highly illustrated publication prepared

by the national Society and provided free to physicians through the Divisions and to medical students through the national office. Top scientists and physicians, many of them active volunteers, are among its authors. It has grown in circulation from 60,000 to 380,000. Previously, in 1948, the Society sponsored Cancer, a monthly technical journal for oncology specialists. It is sold by the publisher, but a limited number of medical libraries receive complimentary subscriptions through the Divisions. Cancer is of international stature, with the appropriate long waiting list for publishable articles. Proceedings of many Society-sponsored conferences have appeared there. A monograph series, authored by outstanding oncology specialists, has been developed to brief practitioners on current diagnostic and treatment concepts.

The Society has been producing films for professional audiences (physicians, dentists, nurses and allied health professionals) in color and sound for professional meetings and small group meetings for over 25 years. More recently, audio cassettes have been made of the ACS conference highlights and audio tapes compiled on nursing topics. These audio materials are available on short-term loan through Divisions and Units, and long-term lease arrangements can be made with professional institutions, groups, and individuals. Naturally, the Society also prepares large exhibits for national and statewide medical, dental, and nursing meetings, and smaller exhibits for display in hospital staff rooms and medical libraries.

The Society has staged many notable conferences, perhaps the most influential being the National Conference on Exfoliative Cytology in 1948. (See Book One, Chapter 4). Beginning in 1949, the Society began joint sponsorship with the NCI of the National Cancer Conference. That conference was held every four years from 1952-1972, with proceedings compiled as hardbound books and excerpts printed in other ACS publications. In addition, the Society has held annual scientific sessions for many years and has staged numerous conferences at the regional and Division level. Since 1972, the Society has accelerated its "national" conference program to between two and four annually. The content provides new knowledge about diagnosis and treatment, often by organ site or by health discipline or profession, with the "front line" physician and the general surgeon as the principal targets. (Because of the dominatinn of surgeons in the ACS, one former president alleges, it has taken 30 years to give priority to radiation oncology. The first national conference on radiation oncology was held in 1976.) (71) In recent years, conference topics have covered updates on childhood cancers, psychosocial aspects of cancer care, chemotherapy, and clinical trials; national conferences for nurses began in this decade.

For the past five years, the Society's conferences--the name is really a euphemism for continuing professional education--have been accredited by the American Medical Association and specialty academies. They compete handily with programs sponsored by these

organizations and are generally very well attended. In 1975, 19,000 individual educational meetings were held by Divisions, Units, and the national office around the nation. (72) Some "packaged road shows" have brought expertise to remote communities. Over 300,000 health professionals have thus been exposed, in their own communities generally, to "new knowledge." (73) (Although a nominal fee is charged for local courses, no registration fee is ever charged at a national conference.)

Because the Society is a national organization with semi-autonomous Divisions, there can be great variability in the quality and content of local professional education programming. The prime target is generally the physician, but, depending on the composition of the Division's professional education committee and some subtle directives from the national staff, the continuing educational needs of nurses, dentists, pharmacists, and other health workers are not ignored.

"Motivation" is the object.. But, "It's very, very hard to get good techniques, particularly educatinnal techniques, adopted with any uniformity throughout the nation," commented Dr. G. Congdon Wood, Assistant Vice President for Professional Education. "It's not realistic, because the conditions in the southeast are by no means the same as...in the northwest. What the physicians are willing to accept in the way of educational materials and programs varies almost from county to county." (74) With its superb network of working committees throughout the nation, the Society is able to accommodate some of these local differences while still producing

materials which are valid but not regionally biased.

Another inhibiting factor to uniform quality is, in Dr. Wood's opinion, the fact that Society staff who are responsible for professional educational planning and implentation are not physicians. While bright, well-educated, and motivated themselves, they also move up the Society ranks and may not transmit their skills to their successors. Dr. Wood has discussed one area to which the Society professional must be sensitive: "When do you infringe on a physician's prerogatives? Obviously, he is the one who makes the judgment as to how he's going to handle his patients....All we can do is provide some background...let him know that if it is a complex [medical] situation, he knows what is required to manage his patient properly...that he knows how to refer his patients." (75) Along with new technical knowledge, the Society does try to provide practitioners with stimulation for sound referral. Each local Division and Unit is responsible for maintaining an inventory of cancer care facilities in its area, although no uniform guidelines have been issued on how to keep those inventories current.

The Professional Education Department staff maintains liaison with numberous professional bodies and the American Medical Association. It has proved to be good politics and good practice.

The Society also uses its expertise to assist other groups. Through a long history of association with the American Society of Clinical Pathologists, a cancer control grant was recently awarded to that organization to underwrite production of four films for cytotechnologist undergraduates. In a now familiar arrangement,

the NCI will distribute the prints, while the ACS underwrites production costs.

Through membership, in the American Association for Cancer Education, the Society learned that third and fourth medical students, when surveyed, did not feel there was sufficient exposure to oncologic information in medical schools. The new Professorships of Clinical Oncology activity was born of this finding. (In part, the Society has jumped into the breech when the medical school cancer coordinator program, sponsored by the federal cancer control program, was eliminated. See Book Two, Chapter 4.) By 1981, if the Divisions are supportive, the Society hopes to support one clinical professor in each of 50 American medical schools.

The proliferation of medical specialties--and of continuing professional education--has given the Society some pause. The Professional Education Department was the catalyst in the establishment in 1972 of the Federation of Clinical Oncologic Societies and serves as its secretariat. The object is to try to consolidate the annual educational meetings of the seven member societies, all of which are related to cancer management but which are relatively small in membership and resources. While not stifling specialty initiative and leadership, the plan is also to encourage multidisciplinary management of cancer, which joint educational experiences might foster.

Cancer Quackery

Historically, the Society has been in the vanguard addressing

the issue of cancer quackery, known diplomatically as "unproven methods of cancer management." There has been a standing committee on the issue since 1954, originally with representatives of the AMA, NCI, FDA, Federation of State Medical Boards, and National Research Council. Its initial action resulted in an AMA resolution that state cancer commissions evaluate local claims for new and scientically unproven cancer remedies. Following passage of the California Cancer Law in 1959, which subjects all new cancer diagnostic and treatment methods to scrutiny and possible ban if found ineffective, the Society circulated a model anti-quackery law. Seven other states have followed California's example. *

The role of the Society is not that of activist. It acts as a repository for information generated by regulatory agencies, scientific institutions assessing the suspect agents, legislative actions, and court proceedings in which alleged cancer quacks were placed on trial. The national information center does enable the Society to respond to inquiries from professionals and laymen, and it assists Divisions in implementing a seven-step program when a proponent of an unproved cancer treatment or test invades a community. Individual volunteers speak around the nation about the deterrent effect a quack remedy can have on a person who has been correctly diagnosed with cancer.

The Society perceives its role in this issue as supportive, encouraging state and federal authorities to take definitive

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*Kentucky, Maryland, Nevada, North Dakota, Ohio, Pennsylvania, Illinois.

regulative action, while the Society combats quackery through positive public and professional education. The American Medical Association, until several years ago, maintained a two-person staff to advise physicians on the issue. The AMA files have been consolidated with those of the Society.

In September, 1976, the Society assembled a working group from federal and professional agencies to develop a more dynamic strategy to deal with cancer quackery. It is estimated that in California alone, despite legislation, consumers expend over $40 million annually to purchase Laetrile, a substance which the NCI and Sloan-Kettering have tested on animals repeatedly without finding it of therapeutic value.(76) The Society has expended re sources on producing a television film, "Journey into Darkness" (1969); written materials, speaker's kits, editorials, reports for physicians, an index of its voluminous files; one staff person responds to inquiries and staffs a standing committee. The contrast between the Society's investment and the consumer investment is gross. Yet, the avenues for aggressive action lie in governmental regulation and enforcement, for which the Scoiety could be a vocal spokesman. Without the Society's educational and informational services, cancer quackery would be even more rife.

Other Services

The ACS National office maintains an excellent library, the reference services of which are available by telephone or written communication.

A Nursing Consultant has been part of the core professional

education staff, developing materials for use by Divisions and Units and stimulating oncologic nurse training. For the past few years, the Society has supported summer externships for undergraduate nurses at several major cancer centers. The long-term payoff is that most of these nurses, upon graduation, will gravitate into oncologic nursing, for which there is a continuing need.

Service & Rehabilitation

Service to the cancer patient, including rehabilitation, has been, characteristically, a cancer control component largely ignored by government. (See Book One, Chapter 8) The American Cancer Society's Service Program, as it was known until the late 1960s, evolved from activities initiated by the Women's Field Army. Such activities may have been, as one relatively recent Society executive perceived 20 years later, "little old ladies in tennis shoes who rolled bandages and the like" (77) but, in many communities, the services provided by the Society were rarely available from public or private agencies. In 1976, bandages were still being rolled and dressings were still provided to cancer patients in hospitals and at home. Many communities operate "loan closets," lending sickroom supplies to homebound cancer patients. Gift comfort items were provided, through donations secured by volunteers. In rural America and congested cities, the ACS transportation service is a boon. Requests for service may originate with a cancer patient, the patient's family, physician, hospital or community social worker; they are honored only with the approval of

the patient's physician. Whenever possible, ACS volunteers actually transport the patient to the doctor's office, hospital or clinic, and arrangements are made with the American Red Cross, but no direct payment is allowed to any transport agency. When a patient has to have outpatient care away from his comminity, ACS Units can arrange between themselves for securing low-cost temporary housing and providing other needed non-medical advice and assistance. In more expansive Units, Service and Rehabilitation Committees may offer a comprehensive program that also includes: support of cancer detection activities; purchase of specified amounts of medication; home-health care services; blood component banking; social work assistance, and assistance with employment problems. (The Society has a good deal of information about job and insurance discrimination against cancer patients, but as yet has not formulated a position or strategy to deal with these issues. (See Book One, Chapter 8.) Some nominal financial aid can be provided only to medically indigent cancer patients for whom no other welfare or community resource is available.

In Cameron's words, the service programs were "homely things to be sure--they don't control cancer, but they just make the misery a little lighter." Of rehabilitation, he recalls the Society never did much because they couldn't see their role in it. "We encouraged it and said, 'like, motherhood, it's great,' but we didn't see what we could do." (78)

Working in conjunction with the federal Rehabilitation Services Administration "to improve the lot of the individual cancer patient as well as the general welfare of the nation," (79) the Society

actively moved into the rehabilitation field only in the late 1960s. (See Book One, Chapter 8). The secretariat of the International Association of Laryngectomees, founded in 1952, is housed and supported by the Society; Reach to Recovery has expanded its national program under ACS auspices since 1969; and the presence of the Ostomy Association has stimulated the Society to invest in enterostomal therapy training of nurses.

The emphasis in all of these efforts has been to channel the self-help instinct, out of which each of these groups was created, into programs that have professional standards and credibility to American physicians and other helping professionals.

The relative neglect of the Society in not acknowledging the rehabilitative needs of cancer patients sooner parallels the neglect by the medical profession generally.

In recent years, stimulated by local initiative in the New York State Division and elsewhere, the Society has developed seminars engaging the clergy as members of the cancer healing team.

The Society has observed the emergence of several self-help groups--Candlelighters (parents of children with leukemia) and Make Today Count (cancer patients), for example--and, if mutual benefit can be derived, these, in time, might become part of the Society's expanding program concerned with the continuing care of the cancer patient and his or her family. The Society places strong emphasis on performance standards, consistency, acceptability to the medical profession, and the translation of national objectives throughout its national network.

Possibly one reason why the Society has been slow to move assertively into other service and rehabilitation activities is its preoccupation with "finding the cure for cancer in our lifetime." Constructively helping individuals and their families live with cancer--and with the social and physical accommodations to it--has been a relatively recent development, as self-help groups have approached the Society and mutual interests have been identified. Two other factors contributed to this passive attitude: community physicians continued to have an attitude of hopelessness about how to manage the extended consequences of cancer; and the Society failed to meaningfully involve social workers, the clergy, and other helping professionals, although it had effectively cultivated physicians, scientists and educators.

In providing information and referral services, it appears that the Society has not been able to preserve consistent quality. In cities where Comprehensive Cancer Centers have been established, this function is being subsumed by Cancer Information Services (CIS) established by the NCI Division of Cancer Control & Rehabilitation. In those communities where the ACS has been involved initially in the planning and implementation of CIS systems, relative harmony prevails. Where ACS involvement has been overlooked, the CIS systems have not been as well received. The ultimate victim in this charade is the citizen who seeks urgent and accurate information.

Group and individual counseling services are being provided by many Units--again, a late development.

For over 20 years, the Service activities of the Society were relatively unchanged. In some communities, they remain limited. But, with the incorporation of three self-help organizations--International Association of Laryngectomees, Reach to Recovery and the Ostomy Association--into the Society's working fabric, an enlightened rehabilitation service is growing.

International Activities

In 1954, the Society Board appointed a committee "to advance the worldwide fight against cancer" and establish a Foreign Desk at the national office to maintain liaison between the ACS and all foreign organizations, governments, and individuals concerned with cancer control. Working through the International Union Against Cancer (UICC), the Society stimulated the organization of voluntary cancer control programs around the world by providing technical and training programs for voluntary agency staff. Members of the ACS Board of Directors and staff participate in international conferences, serve on UICC commissions and committees, the World Health Organization, and other allied international organizations. Once a year, a postgraduate course on cancer is held with a medical school or cancer institute abroad for which Society volunteers are recruited to teach. The Society underwrites visits to the U.S. of selected foreign oncologists to attend Society national conferences and visit cancer institutes.

The Eleanor Roosevelt International Cancer Fellowship Program is supported by the Society, but is now administered by the UICC.

"Volunteers are Our Bosses" (80): Case Studies in ACS Decision-Making

The Society's program has emerged through a process unique to the voluntary sector of American life. Ideas are introduced by staff or volunteers, thrashed out in committee, and ranked in priority. They are implemented only if consensus is achieved throughout the Society's elaborate committee structure. To be undertaken nationally, an idea will be adopted if it weathers discussion sometimes at the Unit or Division Level. Once an idea is approved by a program committee (Professional or Public Education, for example), the Finance Committee, and the Board of Directors, it can be implemented. Rarely is this process swift--although staff and adroit volunteers sometimes engineer promising notions through major committees in weeks, rather than months or years. When the merit of the hemoccult test first came to the research granting area, several proponents were switfly identified among ACS volunteer scientists, and grants for testing this early detection means were awarded.

Yet, in the galaxy of new ideas that originate within a Unit or Division, replication to other Units may take years. Annual Honor Citations are given in each program area as a stimulus to originality and persuasiveness, but the communication means used by the Society rarely selects out captivating ideas or promotes them exclusively. Typical of that process is the experience of two pre-medical students in California in enlisting the California Division's aid to organize the Biology of Cancer course on several California college campuses. Now in its third year, reaching over

6,000 persons a year with an intensive 20-25 lecture-discussion course taught by oncologic experts and others, this powerful health educational concept is finally being broadcast to other ACS Divisions. Several are imitating it--and many more may do so in the future.

Policy-making within the American Cancer Society, as a former ACS President said, is "like putting your fist into a barrel of tar." (81)

The institution's perception of the volunteer by staff tells us something about the relationship staff have as the servants of volunteers, for whom the American Cancer Society is considered "my voluntary health agency." Uniformly, among Society staff who functioned 20 years ago and today, there was little sensitivity about the biased social and ethnic characteristics of the Society's Board of Directors, in whom considerable power is vested. Not at all a cross section of middle-America, the Board is upper middle-class, more than 70 percent male, close to 100 percent professional; less than 3 percent are members of ethnic minorities. Relatively few Catholics or Jews have been or are delegates to the national Board, but of them, several have risen through the ranks to become President or Chairman of the Board.* No woman has ever held either position.

At the Unit and Division level, there is far greater heterogeneity, but Society management admits it has failed in fulfilling

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* Dr. I. S. Ravdin was President in 1962-63, Dr. Sidney Farber in 1968-69; Mr. Francis Wilcox was Chairman of the Board in 1962-1966.

some of its own affirmative action campaigns with respect to volunteers, while doing a far more creditable job among staff.

To Charles Cameron, the ACS volunteer was "the little woman who wanted to do something but she didn't have the means to contribute money. There were little things she could do: she could serve as a member of the local Board, she could solicit during the months of April and May, she could distribute pamphlets...she could shake the canister at the railroad station during campaign times." (82)

Dr. Arthur Holleb, the current Senior Vice President for Medical Affairs, perceives two types of volunteer.

> On the medical side, certainly somebody who has distinguished himself in...medicine...But, before getting to the national organization, I like to see the volunteer who has come up through his own community and been identified as a special person.
>
> I look upon the volunteer as somebody who is dedicated, who knows that it is his responsibility to help direct activities of the organization, keep it on the straight and narrow, to comply with what the public expects from the ACS and what's listed in our constitution and by-laws, and, yet by the same token, in order for me to function effectively with staff, I think that person has to realize that the ACS, for him, is a second occupation.... For the staff of the Society, it has to be a full-time occupation....
>
> The great volunteer is one who recognized what staff can do with volunteers. The great volunteer is somebody who is really interested in the world of cancer, someone who is dedicated to the purposes of the ACS and willing to raise funds...somebody who, although volunteers are directing the program, will give a proper amount of freedom to the staff to develop programs which can be introduced into the machinery of the ACS. (83)

These views, reflecting on operations two decades apart, tend to illustrate one difference. To Cameron, the volunteer strength was "out there" in the cities and towns across the land, in the numberless women who each did a little bit to make the Society and its work visible in the neighborhood. To Holleb, who was an active volunteer in the Society (as was Cameron, Lane Adams and most of the national staff members), the volunteer is the individual who makes it to the top--and then works with professional staff to package the Society's objectives in meaningful programs.

Most volunteers who reach that pinnacle of participation sense that the position does carry personal responsibilities, as well as esteem. One task is to convey expeditiously policy decisions from the national Board to the Divisions and to maintain healthy communications.

Over the past few decades, few informants could report major conflicts between lay and medical Board members. But in at least three issues--cancer detection centers, promotion of the Papanicolaou smear and the tobacco-lung cancer controversy--ACS committees did debate and argue at length, and the end-products have had a profound impact on cancer control programs.

Cancer Detection Centers

As early as 1946, the Society was supporting the idea of hospital-based or free-standing cancer detection centers. Divisions were providing some financial support to 251 such centers around the

nation by 1948, when the Society held a Conference on Center Detection. (84) The cost of case-finding was high; only 1 in 125 supposedly well persons examined actually had cancer. The conferees concluded that it was not practical to promote cancer detection centers to examine all persons, but that cancer detection for "health maintenance" should be promoted in physicians' offices. A few communities could be selected in which the ACS would support demonstration cancer detection centers. In 1949, the Board proposed that all references to cancer detection centers be stricken from lay literature. The measure was discussed and withdrawn, (85) but the sense prevailed: many ACS Board members were arch-conservative, fee-for-service solo physicians. They were adamantly against any service which eroded traditional practice patterns. In 1949, they advocated instead that "Every doctor's office is a cancer detection center." (86) Those centers extant by 1953 were examining about 70,000 patients a year. (87)

Cameron, a product of Memorial Hospital, recalls that cancer detection centers were less suspect than "cancer centers" to the Board, on which sat a galaxy of arch-conservative, fee-for-service solo physicians.

> I remember sitting with the staff one weekend in the ...Society...office, downtown on Beaver Street. We had a map of the United States. We were going through the country by metropolitan population groupings, and we were stricking pins where we thought there were enough people to support a cancer center.
>
> ...This was a reproduction of the Memorial (hospital) Cancer Center...trained specialists devoted to cancer.

> Well when we unveiled this thing, we just about got 'run out on the rail,' because this was the rankest kind of solialism, if not worse. It got very short shrift. There was our beautiful map with pins in it--and it got nowhere." (88)

Cameron's prescience has borne fruit 20 years later. The National Cancer Program has fostered recognition of centers of excellence and comprehensiveness. But, in 1948, the ACS Medical and Scientific Committee was buying none of that.

> I think that if I had been perhaps more courageous, I would have risked my neck and gone around them, but we didn't do that.... They were against the idea [also] of cancer detection centers. I must admit [they] have not proven overwhelmingly successful, but neither has the old cliche about 'every doctor's office is a cancer detection center.' (See Book Two, Chapter 6).
>
> ...It didn't really do anything for anybody except keep this spreading monster of the [cancer] clinic in check. And that was what they were afraid of. They were afraid this whole movement would get into a big super-clinic business. That's precisely where we are today, with the development of comprehensive cancer centers.
>
> ...[My argument] was rooted in this concept: Who would you rather have your stomach removed by, a man who does 200 gastrectomies a year or a man who does six, given that they are of equal competence to begin with?... They would not listen to the logic.... Their argument was that there was no such thing as a cancer specialist...that the surgery of cancer is the province of the anatomically trained surgeon.... We were talking about surgery as a technique and not as a disease-oriented treatment discipline. (89)

Cameron knew first-hand what a concentrated cancer center could accomplish and what an oncologic surgeon could do. In 1948, he was himself still operating on breast cancer patients at Memorial Hospital two days a week. When the Society's work demands multiplied,

out of deference to his own patients, he gave up surgical practice and remained in administrative medicine.

Cameron's views on cancer centers may have set him apart from the "rank and file" of the medical and scientific group, whom he characterized as:

> more or less politicians. I thought they really didn't know too much about cancer, and I also thought they were very, very fearful of the strength of the Memorial Hospital group. Frank Adair [Cameron's mentor at Memorial, ACS President 1942-45] preceded them, but they never would appoint anybody else from the Memorial group. (90)

Nonetheless, they tolerated Cameron, who had been appointed Medical & Scientific Director at the age of 38.

> I think it would be fair to say that the program which evolved is a result of their response to suggestions which came from the staff.... Now when it touched their nerves, such as the issue of cancer clinics or centers...which threatened private practice...they would rise up and react to put me down.... There were some people who were always...afraid...I would do something that would embarrass the Cancer Society. (91)

Promotion of the Pap Smear

Although Cameron's latter-day successor, Dr. Arthur Holleb, claims that Cameron really did "market the Pap smear," (92) the process was excruciatingly long, moving two steps back for every step forward. Selling the merit of the Papanicolaou test was another encounter with medical conservatism.

The Society takes credit for the systematic way in which the cytologic examination for cervical cancer was evaluated, facilities and personnel made ready, and the American public and medical profession primed to use this single most effective form of early cancer

detection. But the tale is not as sweet. Cameron had known of Dr. Papanicolaou's work while an oncologic surgeon at Memorial Hospital in New York. He became a confidant of Dr. Papanicolaou during his tenure at the Society (1946-56) and he still considers the Pap smear the single most important cancer control measure extant. He tried to push the Society into "backing this full tilt." (93)

In October, 1946, the Society's Committee on Statistics and Special Studies tabled a request of a State University of Iowa investigation to expend $5,000 in two years to study the Papanicolaou-Traut technique, "until study of policy in the request of this type had been completed." (94) Tabled at the same session was a $12,000 request of Dr. Joe Meigs of the Massachusetts General Hospital to develop a cytologic laboratory. (95) Following the historic 1948 National Conference on Exfoliative Cytology, which the Society did stage (see Book One, Chapter 4), the Society did grant awards to nine laboratories to train 23 physicians as short-term (four months) fellows in cytology. The Conference affirmed the reliability of the Papanicolaou technique, refined standards for its interpretation, and charted training programs for physicians and technicians. A year later, the Idaho Division was reportedly the first to introduce the availability of the Papanicolaou smear to all physicians, in a program developed jointly with the Idaho Department of Public Health and Idaho Society of Pathology. (96)

The 1951 annual scientific meeting focused on exfoliative cytology, but several months before, the Medical & Scientific Committee still expressed its ambivalence in a resolution forwarded to the Committee on Growth, the NCI, and the Damon Runyon Memorial Fund:

"...in view of the poorly understood changes occuring in the uterine cervix, the Society will use its influence to procure a better understanding of the fundamental facts concerning carcinoma-in-situ, differential diagnosis of lesions simulating carcinoma-in-situ and the clinical significance of the vaginal smear." (97)

Some progress was made: Dr. Papanicolaou in 1951 was given his first research award to investigate the value of exfoliative cytology in the breast and its application in the early diagnosis of breast cancer. The film, "Uterine Cancer, The Problem of Early Diagnosis," was premiered, its mischievous title betraying the persistent reservations of Society Board physicians about the Papanicolaou test.

When Cameron welcomed the Board to the annual meeting in 1951, fully eight years after publication of the Papanicolaou-Traut monograph, he exhorted:

> I hold that we need not wait for more evidence; that there is enough evidence on hand to justify taking the position--women over 40, vaginal smear twice a year.
>
> ...Can we justify any longer delaying a vigorous campaign to press the use of the smear?...
>
> My conscience and the opinion of those with the widest experience in its use say no. (98)

The response was not encouraging. Reflective of its bias toward traditional fee-for-service medicine, the Society adopted standards that "tissue diagnosis, cytologic and histologic, is a professional medical" function...and that adequate tissue diagnosis should be provided "in cooperation with pathologists." (99) The Society shunned active support of public or quasi-public mass screening initiatives.

The tempo was slow. By mid-1952, 15 laboratories had been approved to train fellows (physicians) in exfoliative cytology; a total

of 38 pathologists had thus been trained. (100) Finally, the Medical & Scientific Committee adopted a resolution that permitted Divisions to expend funds to train cytotechnicians in approved facilities. (101) Small grants were awarded to support the Inter-Society Cytology Council. (102)

In a letter of April 21, 1956, to the ACS Cytology Committee of the national Board, the Florida Division remonstrated:

> Whereas the funds expended and the measures taken by the ACS so far have not been sufficient...to encourage the widespread use of [cytological detection] by the public and medical profession... [the] Cytology Committee...be instructed to develop a program of nationwide scope which will promulgate the use of cytology.... [The] ACS [should] assume aggressive leadership... (103)

It was a signal from the constituents. Dr. Charles Cameron moved on to become Dean of the Hahnemann Medical College that year--and the propagation of the Papanicolaou smear fell to his successors, Drs. Kenneth Clark (1956-58), Roald Grant (1959), James P. Cooney (1960-67), and Harold S. Diehl (1957-67).

The 1956 Society Annual Report, in words possibly originating with Cameron, cites the Society's track record and policies. Although the Society since 1948 had encouraged the use of exfoliative cytology, only 70 research or training grants had been made since then related to the subject, for a total of $132,550. (104) The lack of cytotechnologists was cited as the major obstacle. But, a "graduated approach," done in concert with the NCI, the College of American Pathologists, the American Society of Clinical Pathologists, and the National Committee for Careers in Medical Technology, would enable the Society to broaden its uterine cytology activities. Divisions

were advised to support cytology laboratories, training transportation services and test to indigent persons. The national office would promote public and professional education on the subject. The Board then resolved to produce a film stimulating cytotechnology careers and other public educational materials, with the proviso that such materials could only be used by Divisions where "there are existing facilities for cytologic diagnosis and where the local medical society endorses the use of such materials." (105)

In 1957, the Society launched its first organ site theme year, "Uterine Cancer Year." Following a nationwide Society survey concerning resistance to the test by women and physicians, a 10-point program was adopted to aid Divisions and Units to mount an aggressive all-media educational campaign, again, "where laboratory facilities are adequate, and the local medical society and pathologists endorse the plan." (106) Funds were approved to produce the film, "The Human Cell and the Cytotechnologist." The Board called for further pilot studies beyond that in Toledo, which the Society did partially support as a "model of organizational efficiency," and commended the NCI's Shelby County Project. (107) Summarizing the nine-year struggle to get the Society to move ahead more quickly, the anonymous author of the 1957 annual report declared:

> So, cautiously, a step at a time, the national program was planned, pretested, coordinated and put into action. (108)

Tobacco & Lung Cancer

If the American Cancer Society's role in promoting the Papanicolaou smear is a saga of the cautious, yet systematic approach to action,

the Society's posture on the cigarette smoking-lung cancer link can be characterized as "fail-safe." Here, the Society Board physicians were convinced by the scientific evidence much of it generated by the Society-supported Hammond & Horn studies (see Book One, Chapter 3). But laymen, several representing tobacco, advertising and media interests, consistently held the Society back from taking the leadership the public might have expected. Cuyler Hammond "became infused with an almost missionary passion," Dr. Cameron recalled, which Cameron, then a moderate smoker, did not share. "I can remember Cuyler standing up at a meeting and saying [as Cameron did himself about the Papanicolaou smear], 'these lives are on my conscience.'" (109)

The Society sponsored several national conferences; in the late 1940s and 1950s, periodic chest X-rays for older men were recommended, and, once the findings as to cause were becoming clearer the ACS Tobacco & Cancer Committee was appointed. In October, 1954, the Committee adopted this resolution:

> ...[T]he present available evidence indicates an association between smoking, particularly cigarette smoking, and lung cancer and to a lesser degree, other forms of cancer." (110)

The Society pledged half a million dollars for lung cancer research to counter the $1 million research investment of the Tobacco Industry Research Council. (111) Grants were made to Drs. Norton Nelson, Ernst Wynder, and the University of Southern California School of Medicine to pursue the etiology of lung cancer further. (112) The National Lung Cancer Committee was appointed, with phy-

sician scientists Ochsner, Graham, Overholt, and Wynder as members. (113) Subcommittees were appointed to study the effects of air pollution and tobacco and to evaluate mass screening methods to detect lung cancer early. (114) The American College of Radiology rejected the mass chest X-ray screening notion, since three-year survival following detection of suspicious lesions was so poor. (115)

The Society went ahead with public and professional educational strategies and in 1956 awarded $1.3 million to 28 proponents for lung cancer research investigations. (116) The Society also took the lead in organizing a Study Group on Smoking & Health jointly with the NCI, National Heart Association, and American Heart Association, to analyze the results of such research and to identify additional research needs. (117)

In its June, 1957, meeting, the Ad Hoc Committee on Smoking and Health resolved that the "ACS maintain its position by the public." (118) Four months later, the same committee called for more research, but did declare: "The evidence of a cause-effect relationship is adequate for considering the initiation of public health measures." (119)

The Society urged the Public Health Service and States to "protect the health of the people," (120) while the Society would focus on the educational frontier. Daniel Horn was assigned to conduct pilot studies aiding the development and pretesting of program themes, methods and materials. After the pretest, the State of Maryland made a cancer education course compulsory in junior high schools. This course and others were designed to satisfy the Society's position

of "inform rather than reform." (121)

The Society's Committee advised that public funds should not be used in an attempt to make a "safe" cigarette. (122) The Society joined with the Veterans Administration, in 1958, to conduct a three-year study of 12,000 men. The technique of sputum recovery was tested to determine if diagnoses could be made early enough in the progression of lung cancer to save lives. (123)

But, by January, 1959, Dr. Howard Taylor Jr.* Chairman of the Ad Hoc Committee on Smoking and Health, forced the issue:

> "The Society has got to decide what the policy is to be, whether responsibility ends with the completion of a scientific study and presentation to the American public of its results or whether we are, in fact, an educational and control organization obligated to use every honorable means at our disposal to bring about the reduction in death rate from a particular cancer of which we now say we know the cause." (125)

Taylor recommended that the Board of Directors instruct the Ad Hoc Committee on Smoking and Health to propose an overall program or set up a commission to advise the Society. At the June, 1959,

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* Taylor is the son of a founder and early President of the American Society for the control of cancer in the 1950s, Dr. Taylor was Professor and Chairman of the Department of Obstetrics and Gynecology at Columbia University College of Physicians and Surgeons. He served as ACS President in 1955, and held numerous other committee positions. A Senior Consultant to the Population Council, Dr. Taylor recently expressed his priorities: ..."My emotional reaction is that I would want to see more money spent on population and less money on cancer." Life expectancy, Taylor pointed out, would only be extended by three years if cancer were eliminated. (124)

meeting, the status, functions, and responsibilities of the Committee on Tobacco and Cancer were affirmed and staff was assigned. (126)

An early resolution of the new Tobacco and Cancer Committee was to create a national commission on smoking and health. (It took three years for such a commission to be approved and two more before its report was issued as the Surgeon-General's Report on Smoking & Health. (127)

The Society took pains to point out in published reports that it had spend $4 million on lung cancer research other than its own Cancer Prevention studies, Taylor and other physicians found themselves frustrated by concerned laymen--non-medical business Board members--who effectively stalled aggressive actions from 1954 to 1960. Taylor recalled:

> We had a battle on the Board of Directors...[They] were split between the lay members and the medical and scientific members.
>
> The laymen opposed [a resolution saying that tobacco was a significant cause of lung cancer].... The laymen were not going to stir up trouble possibly with their fellow corporation executives until they had to, whereas the doctors weren't involved. (128)

Dr. Ashbel Williams, who subsequently chaired the ACS Committee on Tobacco and Cancer and served as ACS President, confirmed Taylor's recollection.

> Our early efforts were bottled up. We accomplished nothing. There were two Board members, one from Louisville, Kentucky, who stymied any assertive statements by the Society. The meeting rooms were filled with smoke, too. (129)

Even after the Surgeon-General's Report was issued in 1966, Williams recalled the ACS Finance Committee vetoing allocations to

finance more aggressive actions spearheaded by the Tobacco and Cancer Committee. (130)

After the Board resolved to censure any publication of correspondence between the Society and the President of the United States the Secretary of HEW or AMA on this issue, Committee Chairman Taylor declared:

> I am troubled by what the Society is not doing... The ACS is not meeting this challenge. I recommend that we stop putting all our emphasis on education of teenager...let's put these people on the spot who would be influential in changing the present situation."

Taylor called for "radical change...with more courage, less hesitation about whom we might offend." (131)

Taylor did not succeed. The Society continued to walk a safe path, and successive groupings of the Tobacco and Cancer Committee encouraged, requested, urged and postponed taking actions which might antagonize the media, which depended on cigarette advertising clients and which provided the Society with considerable "public service" space and time. Before stepping down completely from the Committee, Taylor emphasized that "opinion makers have a responsibility to be indignant." A Subcommittee on Proposal for an Appeal to Opinion-makers was the response. (132) The Society agreed to (subsequently hold in September 1967) support the First World Conference on Smoking and Health; to urge the National Bureau of Standards to develop uniform ways of measuring tars and nicotine; and to underwrite a pilot smoking withdrawal research project. Eventually $60,300 was approved to support an Advisory Committee for Research on Tobacco Habituation. (133) Although, in 1967, the Tobacco and Cancer Committee recommended that the Society employ a physician to coordinate all of the

ACS activities in tobacco and cancer, this was never done.

The Society, through the late 1960s, pursued its limited program: research support, public and professional education. In 1968, the Tobacco and Cancer Committee reviewed the Board's reticent decision not to be an amicus curiae supporting the Federal Communication Commission's Fairness Doctrine as applied to radio and television advertising of cigarettes, but it praised three courageous divisions--D.C., Maryland and New York City--which did submit friend of the court briefs. In an about-face, the staff were instructed, in 1968, to explore with the NCI how the Society could collaborate with scientists working on a less hazardous cigarette. (134) A new Tobacco and Cancer Committee statement was issued in 1968, but it merely restated on fresh paper the familiar litany of activities. (135)

A few months later, the Committee commended John Banzhaf, who led the fight for equal time on broadcast media for anti-smoking messages, and issued a call for medically supervised withdrawal programs in industry and hospitals. (136) At the annual autumn meeting, the Tobacco and Cancer Committee recommended that British epidemiologits Richard Doll or Bradford Hill be invited to the United States to discuss the impact of the British physicians' smoking habit study (137) and the feasibility of replicating such a study among American physicians. They also discussed the feasibility of a study to assess the overall dollar costs of cigarette smoking to the nation. One final action--tabled at this meeting--was a resolution which would forbid ACS employees to smoke at official Society functions and volunteers to do so in meetings. (138)

For the next few years, the Tobacco and Cancer Committee struggled to act more forcibly, the consequence of being relegated to a "non-action", "non-program" committee. The request of Chairman Dr. Ashbel Williams that the Committee be given "action" status as a site specific task force, for example, were politely ignored. Alternatively, the Committee asked that key "program committee" (e.g., Public Education, Professional Education, Research, etc.) members be assigned to the Tobacco and Cancer Committee to give it stature. (139)

Prompted by the California Division, the Society did file an amicus curiae brief endorsing the FCC plan to give equal time to the tobacco industry, in order to preserve its own public service time opportunities in the broadcast media. (140) The Society continued to withstand the North Carolina Division's disagreement with national ACS policy calling for an end to cigarette advertising. (141) Although publicized by February, 1971, no applications were received for the new Research in Tobacco Habituation program. (142) When all cigarette (and, consequently, anti-smoking) commercials were removed from television in January, 1971, the ACS program was revised to concentrate more on withdrawal clinics, educational activities, and a stronger statement to insurance companies favoring the premium advantage of non-smokers; funds were allocated for research on the effects on non-smokers of tobacco smoking in closed places. (143)

The Committee began discussing the rights of the non-smoker in 1971, but as of 1977 has avoided taking any stand on what was regarded as a "moral" issue. Relegated to evening meetings at the annual Board meeting, the Committee remonstrated with the Board for

its seeming second-class status. (144) The Committee resolved to promote mass withdrawal clinics using techniques pioneered in California. (145) When the National Clearinghouse on Smoking and Health was abolished in 1974 (see Book One, Chapter 3), the Society filed a protest--too late to have any effect. In 1974, the FTC asked the Society to help formulate a new warning label for cigarette packages. (146)

At the end of January, 1975, the stalwart members of the Tobacco and Cancer Committee reexamined the Society's posture and program. They found the effort fragmented. They resolved that a Tobacco and Cancer Task Force be established, with representation from the more influential standing committees. (147)

That Task Force was established and delivered a slick Madison Avenue style multi-media report at the October, 1976, annual meeting. The multifaceted program called for using familiar educational strategies with renewed vigor and insights--and also called for Blue-Ribbon Commission hearings in numerous American cities to draw public and legislative attention to the lingering smoking-cancer issue. It also called for a Congressional investigation into governmental laxity. At this meeting the Finance Committee approved a $1 million a year request to support specific educational activities. Among the recommended regulatory proposals, the Task Force urged Congress to ban all advertising of cigarettes within five years, except advertising of brands which continue to lower tar and nicotine levels. It also urged that the $60 million annual federal subsidy to the tobacco industry by eradicated. (148)

Over the two decades since the Society first became convinced that cigarette smoking was the major cause of lung cancer, Society policy and action have never been dynamic. To this day, the Tobacco and Cancer Committee has not been elevated to "action" status. Instead, the Society has used avenues of persuasion, educational strategies, a variety of research modes, and post-facto withdrawal clinics, rather than confronting either government or industry with an insistence upon more effective control measures. On this issue, the Society has adopted the posture of politesse—pointed the way, yet never really challenging the external forces upon which the Society itself depends: industrial and media interests.

In this issue, it has been laymen who have successfully opposed more aggressive policies, not the medical and scientific leaders who were so resistant to cancer detection clinics and more rapid propagation of the Papanicolaou smear. The dichotomy was summed up by Dr. Howard Taylor, who chaired the first Tobacco and Cancer Committee:

> I took quite a strong part as a physician.... I still think I was correct, but the medical judgment was freer from external compunctions than the lay judgment was.... I think that the work was mostly hampered by the respectability of the ACS. I would like to have had the ACS picket outside this building [where Taylor presently had an office with the Population Council], which was originally the American Tobacco building. I would like to have done some things like have a demonstration.... I still think that the campaign against cigarette smoking ought to have been less proper. I don't think you're going to get anywhere until it gets rougher.... I always imagined letters to the stockholders [saying things like] 'You've got blood on your hands' (149)

From the distance of twenty years since Taylor led these Society debates, he explained: "I think they were cautious and anxious to maintain debate on a courteous level, so they didn't make enemies.... I think that may have been the correct thing for the ACS to do." (150) Then Taylor put his finger on one source of the compromise, the curious chemical reaction when physicians and scientists mingle with industrial barons. "The doctors don't understand what happens in industry. And [industrialists] certainly don't understand us. We think we're brighter than they are. They think they have the power.... I think it's because they understand the handling of money." (151)

Society-Governmental Relations

> I think from the social viewpoint...voluntarism has proved itself to be the real handmaiden of government in cancer control.... Thanks to the genuine trust that has been involved...we have been willing partners.... (152)

Dr. John R. Heller, director of the National Cancer Institute from 1948 to 1960, who expressed this view in late 1975, was instrumental in fostering the partnership between the revitalized American Cancer Society and the revitalized, postwar National Cancer Institute, in which cancer control was a prominent feature.

He and Public Health Service officers Drs. Austin V. Deibert and, particularly, Raymond Kaiser were among the first government program leaders to turn to the Society. Charles Cameron was the ACS Medical Director at that time. "The collaboration between the ACS and the NCI was firm and established early, and I think a lot of it was due to our sense of mission and to our ability as individuals." (153)

The collaboration has operated at the highest decision-making level, with Society-designees appointed to the National Advisory Cancer Council and its successor Board and to numerous NCI advisory bodies, including those concerned with cancer control, and with NCI Directors and program leaders appointed to the Society Board of Directors, to Standing Committees, but not to the Executive Committee. The collaboration was originally based on mutual trust and respect and a sense of common mission.

Cameron explained the ACS-NCI working relationship:

> If we had any feelings of priority, we'd better submerge them and work together, in order to do this great noble thing [control cancer] .... There was a very high and healthy motivation on both sides.... The personalities involved at that time [late 1940s, 1950s] happened to fit together like hand and glove.... Ray Kaiser and [I] were warm personal friends.... All of us from the Society and NCI just enjoyed each other's company.... We evolved programs together just by simply sitting around tables. (154)

When the NCI began to achieve prominence--abetted by the testimony Society leaders offered religiously each year before congressional appropriations committees--Cameron expressed his concern to the Society Board.

> I said, 'we're going to be skunked. People are going to say, if we're giving all this money in taxes, why do we have to give it out of our philanthropy?' Mrs. [Mary] Lasker had no patience with that argument. She said, 'There will never be enough,' so we did go right down...[to] Washington. (155)

When the National Cancer Act passed in 1971, Society alarmists were apprehensive that even greater federal resources would diminish

the Society's fundraising ability. The vastly enlarged NCI budgets have done just the opposite; ACS fund-raising continues to generate $100 million or more of new contributions each year. Cameron attributes the tenacity of the giving public in part to the unique educational skills of the Society and the fact that the NCI is able to fund less than a quarter of its approved grant requests. (156)

The evolution of joint or parallel enterprises--beginning with cosponsorship of public educational films, national conferences, and training programs for cytotechnicians--reached a peak after passage of the 1971 Act, when the NCI and ACS decided to develop the Breast Cancer Detection Demonstration Projects, a major service investment for the Society which had previously shied away from managing actual cancer diagnostic or treatment services. But the first joint activities out of relationships between staff, despite the elitist perception many ACS volunteer physicians and corporation executives had of themselves.

> We realized right off the bat that they [NCI] staff were not the people who got into public health work because they weren't able to practice medicine, but that they were really superior individuals. I don't think we ever quite succeeded in communicating this to the rank and file of our Board. I think the Board always regarded the people in the public health sector as 'country cousins,'...but at the staff level [this view] did not exist. (157)

The attitude of superiority which the Society Board expressed--a Board composed chiefly of fee-for-service medical specialists, corporate business magnates, and professional men---made the mission of testifying before Congress each year a flattering, rather

than demeaning personal experience. They were the citizen watchdogs, trying to tell Congress what the priorities should be. And, traditionally, Society spokesmen have been businessmen whose credentials are reflected by generally conservation political affiliation impeccable Dun & Bradstreet reports, and a tough sense of management acumen softened by philanthropy and dedication to the cause of cancer control. Invariably, these corporate power-brokers have sought ever-increasing NCI appropriations for research, both fundamental and clinical and, to a lesser degree, for organized federal cancer control efforts. The net result has proved rewarding and profitable for both the NCI and the ACS.

Since 1952, the Society has maintained a paid Washington representative who keeps his hand on the pulse of congressional activity, arranges for Society spokesmen, and advises ACS staff when a position statement is desirable on a particular issue.

The symbiosis between the Society and the NCI has been influenced considerably by the principals involved and their degree of mutual appreciation for each other's functions. While there has been sharing of educational responsibilities, with the Society faciliating production and distribution of government-generated materials, there has always been a tacit understanding that, in general, the Society should get the lion's share of credit for joint pursuits, given its philanthropic sources of support. Drs. Raymond Kaiser and Charles Cameron worked well together; they established the working arrangements between NCI cancer control and the ACS related to these education activities. Lewis Robbins and William Ross, subsequent Chiefs of Cancer Control Branch activities in the

Bureau of State Services and Regional Medical Programs, depended less on Society assistance than Kaiser, although Robbins was particularly sensitive to the Society's "jugular" and adroitly selected Society Senior Vice-President Dr. Harold Diehl and past president Dr. David Wood to serve on his own Cancer Control Program Advisory Committee.

When the National Cancer Act was being proposed in 1971, one knowledgeable ACS Board member asserts that at least one Society executive staff person did everything he could to try to prevent the Society taking a positive position favoring the Act. The ACS resisted placing an advertisement, with specially contributed funds, to support the Act. The Society's legal counsel was asked to render an opinion whether obvious support for the Act infringed upon the ACS's tax-exempt status. On the contrary, stated the opinion, the American Cancer Society was formed to do "everything it possibly could against cancer," and that if the Society did not promote the conquest of cancer in every possible way, it was not fulfilling its duty. (158)

Of course the Act did pass. The hundreds of millions of dollars appropriated for the National Cancer Program have been paralleled by similar gains in Society contributions, from $50 million in campaign receipts in 1969 to over $85 million in 1976. (Legacies of up to $35 million boost the total receipts to over $100 million annually.)

The period since 1971 has been the most dynamic and perhaps most frustrating for Society leaders. Cancer Control activities were mandated by the 1971 Act, and the new Division of Cancer Control and

Rehabilitation, with earmarked appropriations upwards of $50 million annually, eventually proposed to undertake some activities historically developed and handled almost exclusively by the ACS and its units. For example, the Cancer Information Service communications networks, short-term contract activities based in 17 comprehensive cancer centers throughout the nation, have presumed to respond to public and professional inquiries with greater specificity and utility than the service available in most ACS units.

Early in 1972, Dr. Carl Baker, then NCI Director, who was "surprised to see the [cancer control] language in the new legislation," (159) sought the advice of the Society about how to fulfill the mandate. He asked the ACS to submit their views on ends--oriented objectives; a definition of cancer control that would insure discrete funding of such activities; evaluative criteria to measure program performance; a recommended pattern of administration; and categgories of potential funding recipients and mechanisms. (160) Baker sensed the climate at the National Institute of Health was not sympathetic to control programs, because they "lack the rigor of investigational design" (161) that he believed NIH was accustomed to exercising.

In his reply to Dr. Baker, ACS Executive Vice President Lane Adams stated that the Society's definition of cancer control did not include research or delivery of patient care. The ACS had abjectly refused to move into patient care, other than selected rehabilitation activities which were conducted only with a physician's sanction, but the Society, of course, had maintained a strong extra-

mural research program since 1945. Adams forwarded to Baker a list of potential "partnership" activities in target sites such as breast, colon, and uterine cancers. He also suggested other activities concerned with rehabilitation, information and counseling, professional and public education. The Society was "not suggesting the ressurection [sic] of old cancer control programs, but rather, an updating, development of matching responsibility areas." (162) The Society expressed some preference for large-scale cancer control programs to confirm research findings in the use of chemotherapy to treat leukemia and other hematologic cancers and to evaluate immunotherapy. Demonstration projects and evaluation of new diagnostic tests were also recommended. (163)

Dr. Arthur Holleb, appointed in 1970 as Senior Vice President for Medical Affairs and Research, does not regret the closer relationship with the NCI; he was flattered, as were most of the Execuitve staff, that the NCI sought the Society's help.

> I think the ACS had to show the way, because the NCI had no experience really in cancer control... or just...minimal experience.... I think it was our duty as interested citizens to participate in the governmental operation, to give our all to it, and we have given them all of our good ideas. We could have kept these to ourselves, but I think eventually the ideas would have come to the surface. Since there was this kind of money available to conduct these programs, the opportunity was there. (164)

Although no first year appropriation for cancer control activities was included in the Act, Dr. Baker moved $4 million from other activities to get things rolling. He did not feel the NCI was the suitable environment for cancer control programs then--and he persists

in this view. (165) This opinion, plus other factors, may have cost him the NCI Directorship. Later in 1972, President Nixon neither appointed him Director of the new National Cancer Program nor, concurrently, of the National Cancer Institute.

The ACS and NCI's Division of Cancer Control and Rehabilitation entered into a major visible joint endeavor when they embarked on the Breast Cancer Detection Demonstration Projects (see Book One, Chapter 5). It was the first time that the Society managed and partially underwrote direct patient care services. Along with NCI staff, ACS staff (chiefly Dr. Holleb and statistician Herbert Seidman) have had to combat the deterrent impact generated in mid-1976 by the assertion that routine mammographic screening of women under age 50 is of no benefit and may, in fact, induce more breast cancers than it detects. Whether this "bad wind" will be reflected in reduced confidence or contributers to ACS is premature to determine.

There is considerable variation among the Divisions and their workings with state legislatures. Some Divisions maintain paid representatives, as they did in California until very recently, who also have as clients the state medical society and other voluntary health agencies. In a number of states, local Divisions are more assertive in taking positions on issues related to cigarette smoking, quackery, and environmental safety than the national Society.

Historically, it has been rare for a Scoiety staff member join the government, as Daniel Horn did; but even more unlikely has been the invitation by the Society for a government employee to join the ACS staff. Jean Weddle, former assistant to Dr. John R. Heller, has moved up through Society staff ranks over the past decade to become

Vice President for Administration for Medical Affairs. Frank J. Rauscher, Ph.D., who managed the National Cancer Program from 1972 until late 1976, was actively recruited by the Society to become its new Senior Vice President for Research. In this era of reaffirmed cooperation rather than competition, the ACS could not have been more shrewd--or successful. Dr. Rauscher's affirmative decision is a testimony to the Society's international stature clearly in the same league as the NCI, in the broadest interpretation of cancer control.

Some ACS staff predict the present growth rate of federal funding for cancer research and control may not persist. As ongoing or new programs find themselves with diminished funding, Dr. Holleb predicts they will lean more and more on the Society. And, he adds, "It is going to be our job to see what can be rescued through the appropriate use of the volunteer." (166) Holleb expects the Breast Cancer Detection Demonstration Projects (BCDDP) to lose their federal support and possibly their ACS national funding. They were designed as demonstrations--not permanent services. Already negotiations are underway in a number of communities where BCDDPs are located to develop local funding to sustain them. (167)

Dr. Charles Cameron has been out of the direct line of cancer control management since 1956, but he remains an active ACS volunteer, an occasional invited speaker, and concerned cancer control statesman. He predicts that the comprehensive cancer center pattern, established by governmental incentives, may only endure with ACS sustenance. "Suppose the government pulls out the underpinnings. [Dr. Zubrod, Director of the Florida Comprehensive Cancer Center]

has said...that he might have to turn to the public in order to carry the program forward. Now this would be a serious threat to the ACS." (168)

The ACS House of Delegates has considered the issue and decided affirmatively that local divisions must cooperate with comprehensive cancer centers. Cameron concludes,

> If (they) are going to achieve something, let's help.... If it proves to be a dud,...we will have done our best in good faith.... (169)

Although Cameron recognizes a hazard if the ACS turns over some of its resources, gathered from donors who "feel good about giving," (170) when they give to a voluntary agency, to sustain a governmentally created center, he thinks the American people will continue to support the Society.

> The Cancer Society is either going to sustain these Centers as they have got[ten] underway or let them fail.... If they falter, the Cancer Society faces the choice of passing on grant money in effect and permitting [Centers] to proceed under [arbitrary and unreliable local support] or say, 'All right, we'll take over. We'll support it. We'll put it in the hands of local professional committees....'
>
> ACS will not be practicing medicine--and yet it will not be a government sponsored affair. (171)

If Holleb and Cameron, his mentor at Memorial Sloan-Kettering and at the ACS, are correct, the American Cancer Society will be active and well long after the current ballyhoo about the "conquest of cancer" has exhausted governmental crusaders.

Reflections on the History of the American Cancer Society

The American Cancer Society has been the single most powerful influence in American cancer control activities. Beyond the scope of its own program, evolved through a remarkable adherence to volunteer commitment, the Society has been a major force in boosting the National Cancer Institute to its present level of development. The NCI has relied upon the Society to use the avenues of private influence to increase cancer research appropriations; at the same time, the NCI has not seriously encroached on the Society's cancer control prerogatives: public and professional cancer education.

The Society has become a model not only of sound management in the U.S. nongovernmental sector but of worthy replication in other nations. The ACS has know-how, principles, standards of performance, and, generally, conducts its affairs in a commendable business-like fashion. The ACS professional staff are assisted in maintaining quality business practices by volunteers who bring their own management acumen to bear at every decision-making level.

The ability of the Society to harness the energies of so many volunteers--one percent of the nation's populace--is an extraordinary achievement. Similarly, the Society has been a consistently effective fundraiser, mingling time-tested techniques such as door-to-door canvasing with a changing parade of innovations. No other American voluntary agency has sustained such a steady resource growth record, even in periods of economic recession. The Society's legacy program has become the richest such endowment among voluntary agencies.

By any measurement, the calibre and competence of individuals attracted to be Society volunteers is high. This is particularly true of the medical and scientific volunteers who apply rigorous standards in reviewing ACS research and fellowship proposals. The Society's research program is imaginative and generally forward-thinking. Recognizing that the time-lag between application and notification can be at least six months, at its January 1977 Board of Directors' meeting, Dr. Frank Rauscher introduced a proposal to allocate five million dollars annually for rapid-action proposals, generally addressed to targeted research needs. It was approved.

The Society's exploitation of public media--and the individuals who control it--has been exemplary. Throughout the nation, public service time and space are donated to carry fresh messages of cancer prevention and detection.

But the Society is not without flaws. At the core is the fact that the Society is not representative of "middle-America," nor donated by consumers." The ACS Board of Directors has a static quality: predominately white, affluent, Protestant male physicians (surgeons, especially), and corporate leaders. Relatively few blacks or women are elected to the national Board, seemingly leaving the Board's composition roughly one decade behind most of American society. The ultimate recipients and beneficiaries of Society programs are not truly represented other than at the local level. Consequently, the ACS is slow to change, tending to adopt middle-of-the-road, even arch-conservative positions, capitulating to special interests

(pathologists, advertising and media interests). The motives may simply be practical: bolder initiatives might offend large and small donors alike. But, the end-result is that the Society's program is temperate when it might be more activist; and in the case of rehabilitation, the Society waited until self-help groups approached the ACS, rather than asserting itself.

One key illustration of conservatism is the ACS's overriding fear of intruding into medical practice patterns. Here, Mrs. Helene Brown, a volunteer for 20 years and current member of the ACS Board of Directors, believes the Society has a conflict of interest.

> The Society, which is supported by contributions of the consumer, ought to represent what is ultimately in the best interest of the patient (consumer). Instead, there are... too many instances where worry about the medical profession takes precedence over what is the best for the patient. (172)

This attitude, Mrs. Brown feels, explains why the Society was so laggard in promoting the Papanicolaou smear and fostering cancer detection clinics and breast examination centers, and, why, in the information and counseling function of Society Units, there has never been a policy to determine who are the "good physicians" who are worthy of recommendation.

> "Who is a good doctor?" is the most frequently asked question...of ACS offices nationwide. The Society has never accepted its responsibility... of stating what a "good doctor" ought to be, and then proceeding with recommendations.... Though admittedly touchy...the ACS ought to offer the "giving public" guidance here.... The Cancer Information Services are doing a better job.... (173)

Reluctance to interfere with medical practice explains also why the Society's rehabilitation program was so slow in developing. But this attitude does not explain why the cancer quackery activity, for which the ACS has been the leading nongovernmental force, has been, until recently, relatively inert. In this case, it appears the Society's conservative tenor has inhibited assertive pressure on federal agencies. Instead, the operational mode has been counter-quackery education and information--not pressure for regulation and governmental responsibility.

"Volunteers are our bosses" may not entirely be true at either the national or local levels. There have been instances, according to Mrs. Brown, when staff have not been entirely open with volunteers, eventually causing embarrassment to the ACS, or when volunteers are "appointed" to top committee positions through staff manipulation of nominating committees. The failure, Mrs. Brown believes, lies not so much in the ACS system, which is a nationwide corporate structure, but with a certain degree of volunteer apathy. If the volunteers <u>are</u> the bosses, they must be responsible agents who should transmit information back to the regional and local level, and not just revel in the personal associations garnered in Board service.

The quality of professional medical staff leadership has varied in the past 64 years. The Society, as with all voluntary agencies endeavoring to keep their administrative costs low, has not always been able to attract "top dollar" physicians to occupy national staff offices. Through the 1950s and 1960s, many of the medical and scientific staff had retired from other careers (military, academic) and had additional income. More recently, the Board has been convinced that

if strong national professional leadership is important, it must be compensated. Salaries and benefits for the three highest-paid national staff reflect this recent change of attitude. Over the past few years, similar incentives have been implanted to attract and sustain skilled Division directors.

With respect to fellowship and research grant activities, the Society's record is curiously uneven. It has pioneered in many areas, yet only in recent years have research funds been allocated to environmental carcinogenesis research. Even with its Research Analysis and Projection unit, most funded research projects are in traditional fields.

Among the national staff, there is little enthusiasm for qualitative evaluation, which is costly. Several years ago, the Society installed the PAR system of "management by objectives," in which evaluation is essentially quantitative. The PAR system is a quick way to assess, quantitatively, how well a unit or Division is proceeding toward a stated goal, but it does not foster interfaces between the various ACS programs nor indicate gaps and points of potential joint programming. There appears to be much less practical communication to avoid duplication and share resources than is desirable in an organization which expends $100 million a year. Despite management workshops and other techniques, lines of decision-making are sometimes fuzzy between the national and Division and Unit staffs. Imaginative local programs take an inordinately long time to be recognized at the national level and packaged for replication in other areas. In this situation, the preservation of

"state's rights" seems to prevail, at the possible expense of progress.

On balance, the social elitism of the Society has been a compelling factor in drawing into its ranks outstanding and motivated staff. The network of social and professional ties among active volunteers has been maximized by the Society, in general to the nation's advantage.

The American Cancer Society has set the tone, the style, even the pace of activity emulated by other American voluntary health agencies. Unlike some of them, the ACS is not a one-man institution. It is a product of corporate decision-making, reflecting the perspectives and prejudices of its volunteer policy-makers. For many volunteers, there can be no higher calling than service, locally and nationally, to the American Cancer Society. Some of its shortcomings, ironically, stem from its ostensibly democratic forum. It is, as one former president has said, "a clumsy organization?" In his opinion, "a benevolent dictator could have done more." (174)

Whatever its failings, the ACS works--and works astonishingly well. As the watchdog over government and a major protagonist favoring government's public responsibility to sponsor cancer research, the American Cancer Society performs unusually productive public service.

During the Regional Medical Programs era, the Society generally excluded itself from participation in these government-created programs. Since passage of the 1971 National Cancer Act, however, this policy has been altered to permit the ACS to act as fiscal intermediary for federal funds and to participate assertively in community cancer control and comprehensive cancer center developments at the local level.

Community-based cancer control programs, in the opinion of Helene Brown, "will have no opportunity for success without the co-operation of the American Cancer Society, which holds the leadership role in cancer control knowledge and activities." (175) Moreover, Mrs. Brown, who bridges both the Society and community-based programs, asserts, "The American Cancer Society has a monopoly on qualified cancer control volunteers, both lay and professional." (176)

The future of organized cancer control programs in the United States is inextricably tied to the future of the American Society. There is serious doubt that even "a cure for cancer in our lifetime" could accomplish the Society's oft-proclaimed goal of being put out of business.

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(6) See note (1), Triolo & Shimkin reference, at 1625.

(7) See note (1), Triolo & Shimkin reference, at 1626.

(8) See note (4) at 1929.

(9) See note (4) at 1930.

(10) See note (4) at 1931.

(11) See note (4) at 1935.

(12) See note (4) at 1935.

(13) See note (4) at 1936.

(14) See note (4) at 1936.

(15) See note (4) at 1938.

(16) The Cancer Council Bulletin 19: March, 1937, at 9.

(17) See note (1), Triolo & Shimkin reference, at 1627.

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(19) See note (4) at 1940.

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(23) See note (4) at 1943.

(24) See note (4) at "Onward--1944."

(25) See note (24).

(26) Interview with Mrs. Mary Lasker, Honorary Chairman of the Board, American Cancer Society, by Lester Breslow, Devra Breslow, and Larry Agran of HCCP, March 16, 1976, Beverly Hills, Ca.

(27) See note (1), Cameron reference, at 877-78.

(28) American Cancer Society: The American Cancer Society-A Factbook for the Medical and Related Professions. New York, American Cancer Society, Professional Education Publication, 1973, at 5.

(29) Interview with Dr. Charles Cameron, former Medical Director and Vice-President, American Cancer Society, by Devra Breslow of HCCP, May 22, 1976, Miami Beach, Fla.

(30) See note (29)

(31) Letter from Lane W. Adams, Executive Vice-President, American Cancer Society, to Devra Breslow, November 11, 1976.

(32) See note (31).

(33) Interview with Paula Green, member of Board of Directors, American Cancer Society, and President, Green Dolmatch Advertising, by Devra Breslow of HCCP, October 13, 1976, New York City.

(34) See note (29).

(35) Devra Breslow. Notes taken at 1976 Board of Directors meeting, American Cancer Society, October 16, 1976, New York City.

(36) Interviews with American Cancer Society Board of Director volunteers Francis Wilcox, Armin Willig, and LaSalle Leffall, M.D., by Devra Breslow of HCCP, October 13-15, 1975; with Dr. Frank Adair, May 18, 1975; with Dr. Arthur Holleb, May 21, 1975; with Mr. Lane Adams, October 21, 1975, New York City.

(37) See note (29).

(38) See note (2) at 224-227.

(39) See note (29).

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(41) American Cancer Society. 1949 Annual Report. New York, American Cancer Society, 1950, at 29.

(42) Personal communication with Dr. Charles Heidelberger by Devra Breslow of HCCP, January, 1977.

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(46) Glemser, B.: Man Against Cancer. New York, Funk & Wagnalls, 1969, at 50.

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(56) See note (29).

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(74) See note (72).

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(153) See note (29).

(154) See note (29).

(155) See note (29).

(156) See note (29).

(157) See note (29).

(158) Anonymous communication.

(159) Letter from Dr. Carl Baker to Devra Breslow of HCCP, July 8, 1976.

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(161) See note (159).

(162) Letter from Mr. Lane Adams, Executive Vice-President of the American Cancer Society, to Dr. Carl Baker, then Director of the National Cancer Institute, March 17, 1972.

(163) See note (160).

(164) See note (83).

(165) See note (159).

(166) See note (83).

(167) See note (83).

(168) See note (29).

(169) See note (29).

(170) See note (29).

(171) See note (29).

(172) Personal communication from Mrs. Helene Brown, Executive Director of Community Cancer Control in Los Angeles for the American Cancer Society, to Devra Breslow of HCCP, February, 1977.

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(176) See note (172).

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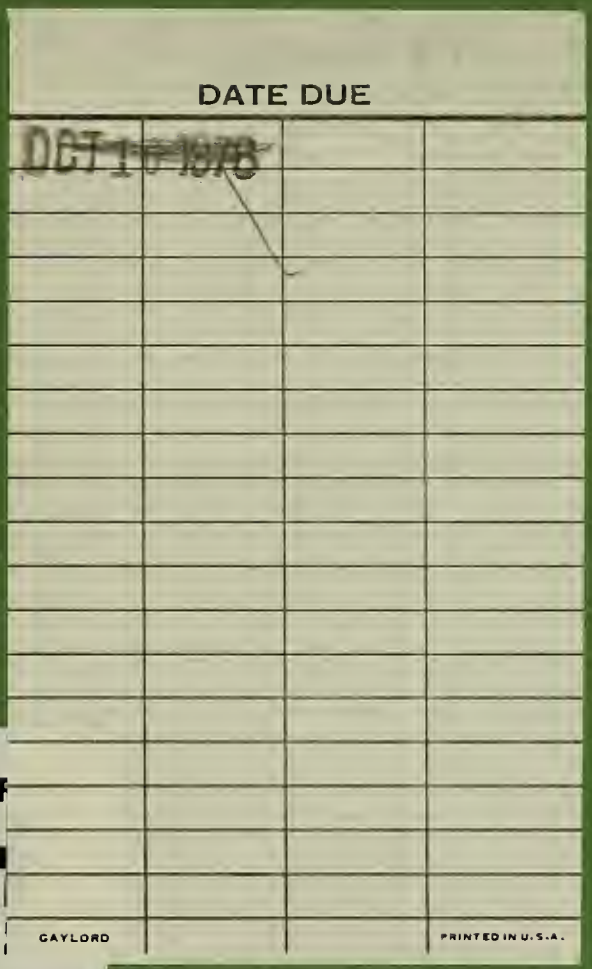

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